AMATEUR RADIO

VOL. 53, No. 2, February 1985

JOURNAL OF THE WIRELESS INSTITUTE OF AUSTRALIA

VK2 Division Winner of the 1984 RD Contest
Full RD Results
John Moyle Field Day Rules
Adaptive Keyer to Construct
How to Approach Public Relations
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Photograph by Tony Clarke VK4AJB.

Gympie ARC repeater site. On the tower are two 2 metre and two 70cm antennas plus a solar panel which is used to power the repeaters. See story page 46.

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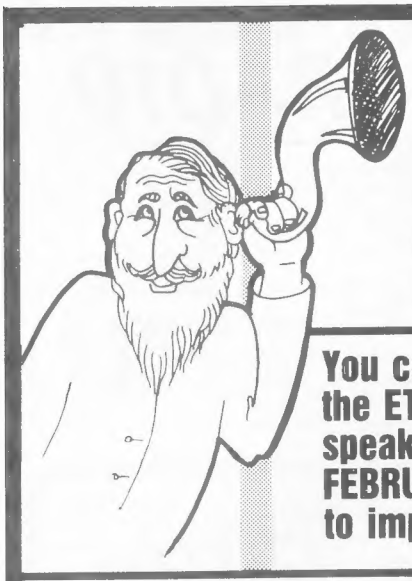

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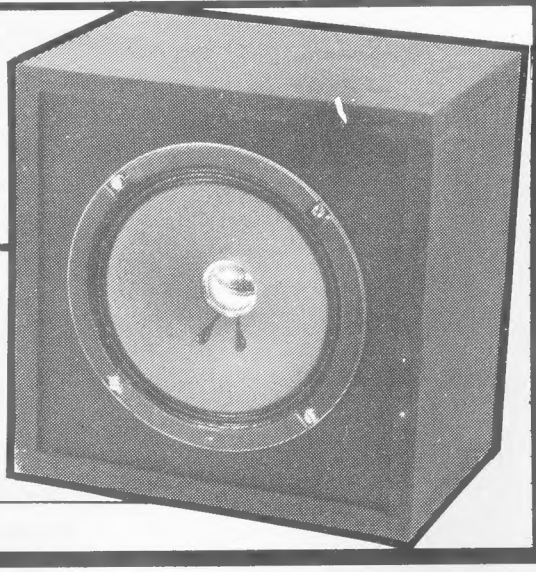

Also in the FEBRUARY ELECTRONICS TODAY

- **A closer look at CROs.** • **NiCad battery review.**
- **ETI's mega CRO survey**
- **A Techniques report on how to use your computer to help design basic amplifier circuits**

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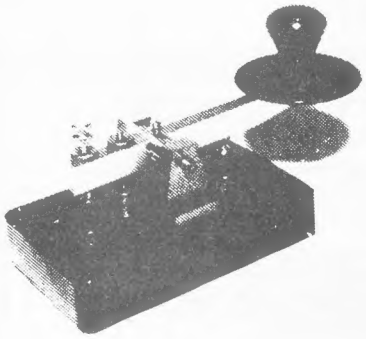

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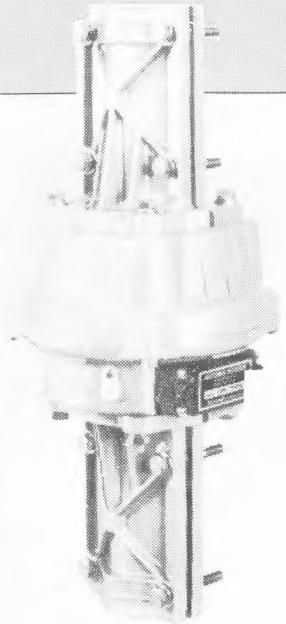

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SPECIAL REMINDER NOTICE

With the pressures and excitement of Christmas and the New Year have YOU misplaced your subscription notice and forgotten to send your remittance for 1985?

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a word from your EDITOR

THE BEGINNING

In March 1910 a small group of Australian radio pioneers met in Sydney to form the "Institute of Wireless Telegraphy of Australia". The name was changed several times in the ensuing years, *see last month's article reprinted from the IREE journal "Monitor"*, but this was the beginning of the Wireless Institute of Australia, whose 75th anniversary we now celebrate.

What kind of a world did these pioneers know? What was radio in 1910? Why should Australia have been the first country in the world to form an amateur radio society?

Picture the Australia of 1910. The city of Sydney had only been lit by electricity a mere six years before, the last Australian capital to introduce this modern marvel, although NSW could boast that the town of Tamworth was the first in Australia to have electric light, in 1888. There were barely four million people in the whole country. There were motor-cars, but they were primitive. Aeroplanes, even more primitive, only 7 years after the Wright brothers first flew at Kitty Hawk.

Marconi and those who followed his experimental lead, our founders among them, had by 1910 shown the ability to send spark-generated signals thousands of miles. But electron tubes did not appear for another three years. The transistor was 38 years into the future. There was no broadcasting, eventually, the early amateurs were the first broadcasters.

And why was the WIA first? We may presume that many of those four million felt that they were the farthest-flung outpost of the British Empire. Communication, by wire telegraphy and submarine cable, to the Mother Country was slow and expensive. Was there more incentive here to develop the new field of wireless, rather than in America or Europe, each relatively self-sufficent? Certainly, at that time, Australia enjoyed perhaps the highest living standard of any country in the world, mainly earned from wool and wheat, gold and silver, with other minerals coming up fast. Prosperous times encouraged initiative.

Next month we will look at the part played by amateurs, and the WIA, during the last 75 years.

Bill Rice VK3ABP
Editor

AR

WIA NEWS

BAND PLAN PROPOSALS

The following band plan proposals from the Federal Technical Advisory Committee will be discussed in detail prior to ratification at the WIA Annual Convention in April this year.

Would members study the following plans and pass any comments or counter proposals to their Divisional Officers as soon as possible.

FM REPEATER OUTPUT FREQUENCIES AND RECOMMENDED USAGE

Output: 1253.025-1255.000 MHz at 25 kHz
Input: 1241.025-1243.000 MHz (12 MHz split)

Frequency MHz	Usage
1253.050	*RTTY*
1253.100	*Mobile Voice*
1253.150	*RTTY*
1253.200	*Mobile Voice*
1253.250	*Data*
1253.300	*Mobile Voice*
1253.350	*Data*
1253.400	*Mobile Voice Secondary*
1253.500	*Mobile Voice Primary*
1253.600	*Mobile Voice Secondary*
1253.700	*Mobile Voice*
1253.800	*Mobile Voice*
1253.850	*ATV Liaison*
1253.900	*Mobile Voice*
1253.950	*ATV Liaison*
1254.000	*Mobile Voice*
1254.100	*Mobile Voice*
1254.150	*RTTY*
1254.200	*Mobile Voice*
1254.250	*RTTY*
1254.300	*Mobile Voice*
1254.350	*Data*
1254.400	*Mobile Voice*
1254.450	*Data*
1254.500	*Mobile Voice*
1254.600	*Mobile Voice*
1254.700	*Mobile Voice*
1254.800	*Mobile Voice*
1254.900	*Mobile Voice*
1255.000	*Mobile Voice*

The above band plan was prepared after a detailed examination of the effects of transmission from amateur equipment on the Melbourne Radar Installations. Accordingly, FTAC is proposing a 12 MHz split for 23 cm repeater operation.

PROPOSED 23 CM BAND PLAN

Frequency Range MHz	*Usage*
1240 — 1241	*FM Relays and links*
1241 — 1243	*FM Repeater inputs*
1243 — 1252	*ATV Channel 1, sound 1251.75, vision 1246.25*
1252 — 1253	*FM Simplex*
1253 — 1255	*FM Repeater outputs*
1255 — 1256	*FM Relays and links*
1256 — 1257	*Digital and Packet Radio*
1257 — 1260	*In-band and Cross-band Linear Transponder*
1260 — 1270	*Satellite Communication (WARC 79)*
1270 — 1280	*DOA RADAR*
1280 — 1293	*ATV Channel 2, sound 1292.75, vision 1287.25*
1293 — 1295	*In-band Linear Transponder*
1295 — 1297	*Weak Signal Modes*
1297 — 1300	*DOA RADAR Guard Band*

FM SIMPLEX FREQUENCIES AND RECOMMENDED USAGE

1252.025-1253.000 MHz at kHz spacing.

Frequency MHz	Usage
1252.100	*RTTY*
1252.200	*RTTY*
1252.300	*Voice Secondary*
1252.400	*Voice Secondary*
1252.500	*National Simplex Voice*
1252.600	*Voice Secondary*
1252.700	*Voice Secondary*
1252.800	*Data*
1252.900	*Data*
1253.000	*ATV Liaison*

AR

WIA Seventy Fifth Anniversary News

FEBRUARY 1985

SUN	MON	TUE	WED	THU	FRI	SAT
					1	2 VK3 NAOCP Revision French 40m Ph Test
3 VK3 NAOCP Revision French 40m Ph Test	4 School Resumes VK3 Independ Day-4S7	5 VK1 NAOCP Classes	6 NZ National Day	7 1030 & 1130 — Educ Net VK1 AOCP Classes	8	9 QCWA CW QS0 Party YL-OM Phone Test VK3 AOCP Revision Dutch PACC Test
10 QCWA CW QS0 Party YL-OM Phone Test VK3 AOCP Revision Dutch PACC Test	11 School Resumes VK5 School Resumes VK6	12 People Day — S VK7	13	14 1030 & 1130 Educ Net St Valentines Day	15 VK4 AGM	16 ARRL DX CW Test Lithuania Indep Day
17 ARRL DX CW Test Gosford Field Day VK3 Midland Zone Conv	18	19 Shrove Tues School Resumes VK7	20 Ash Wed By New Year	21 1030 & 1130 — Educ Net Cut-off date for WIA Renewals	22 AR Copy Deadline CQ WW DX 160m Test	23 JMNFD Test CQ WW DX 160m Test RTTY World Test VK2 WICEN Confer RSGB 40m CW Test
24 CQ WW DX 160m Test VK2 WICEN Confer JMNFD Test Nat Day — Estonia RSGB 40m CW Test	25 VK3 AOCP Classes VK1 AGM	26 VK3 NAOCP Classes VK5 GM	27 Close of VK2 Noms & AGM items Final posting — 150th Test Logs	28 1030 & 1130 — Educ Net	Dates correct at time of printing.	

PRE-STAMPED ENVELOPE

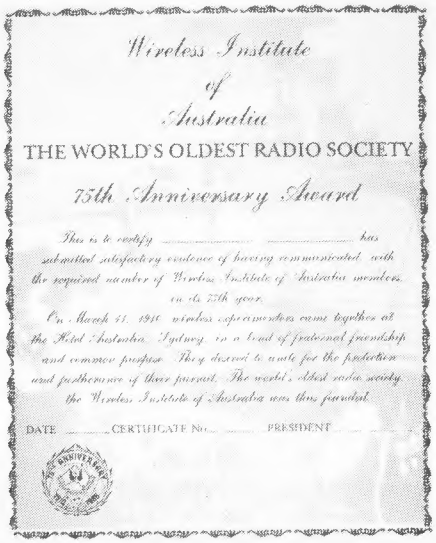
Officers of the Institute met recently with a member of the Graphics Department of Australia Post to preview the design of the envelope which will be issued to celebrate the 75th Anniversary in May this year.

CW CONTEST

This copy of AR carries the rules of a special CW contest which the VK2 Division are organising for this Anniversary year. The overall VK winner will receive the FEDERAL PRESIDENTS CUP, a handsome piece of silverware, to hold for one year. Every member who enters a log with more than 75 contacts will receive a special 75th Anniversary memento.

75TH AWARD

The rules for this contest will be printed in the March issue.



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THE WORLD'S OLDEST RADIO SOCIETY

75th Anniversary Award

This is to certify ..... *has submitted satisfactory evidence of having communicated with the required number of Wireless Institute of Australia members in the 75th year.*

On March 11, 1910 wireless experimenters came together at the Hotel Australia, Sydney, in a bond of fraternal friendship and common purpose. They desired to unite for the protection and furtherance of their pursuit. The world's oldest radio society, the Wireless Institute of Australia was thus founded.

DATE ..... CERTIFICATE No. ..... PRESIDENT .....

VK7 CELEBRATIONS

The 1985 Tasmanian Amateur Radio Convention will be held over the Queen's Birthday weekend the 8th to 10th of June 1985. This "Hamfest", as it is more usually known, is under the organisational auspices of the Southern Branch of the Tasmanian Division of the WIA and will be centred around Hobart.

The "Hamfest" will provide an opportunity for amateurs to share their hobby with other enthusiasts and hopefully with the public at large. The theme of the "Hamfest" will be "Amateur Radio, Yesterday, Today and Tomorrow."

1985 is the 75th Anniversary of the WIA's foundation and is also the 60th Anniversary of the formal establishment of the Tasmanian Division. This year is also the 40th Anniversary of the re-activation of WIA activity in this State after the suspension of amateur activity for the duration of World War One.

It is therefore intended to make this "Hamfest" the focal point of the celebrations of these anniversaries. A number of historical (and maybe hysterical) re-enactments of some wireless communication landmarks are proposed.

1 To begin with permission has been sought to activate briefly a "spark transmitter" to recreate the "POP MEDHURST" experiments of 1901.

It is interesting to note that as early as 1896 Australia was to the fore in wireless experimentation. The Chief Electrical Engineer of the Victorian Postal Department, a Mr H W Jenvey, played an important role in the early development work. Professor W Bragg gave a lecture (entitled 'telegraphy without wires'), at the Adelaide University on 21st September 1897. During the visit of the Duke and Duchess of Cornwall and York in the vessel R M S 'OPHIR' in 1901, the naval escort vessels H M Ships 'St George' and 'Juno' established the first marine radio communication in Australia with shore stations at Queenscliffe lighthouse, Victoria in May 1901, and at Longbeach lightstation, Sandy Bay, Tasmania in July 1901.

Local Government and Service clubs are supporting this venture.

2 In the northwest of Tasmania work is proceeding on a trans Bass Strait net to re-enact the establishment of the first land station licensed in 1906 and located at Devonport.

The initial step towards inaugurating wireless telegraphy as an official communication medium in Australia was taken with the passing of the Wireless Telegraphy Act in 1905. The first fixed land station was licensed by

the Post Office on 7th June 1906. Located at East Devonport, Tasmania, it was owned by the Marconi Wireless Telegraphy Co and was used to communicate with a similar station later established at Point Lonsdale, Victoria. On the 12th July 1906, when both stations were fully operational, the Governor-General of the period sent what is believed to be the first Australian official wireless telegram to the Governor of Tasmania: *"The Commonwealth greets Tasmania and rejoices at the establishment of the means for knitting the people of Australia more closely together-Northcote."*

The organisers of this proposed net are open for ideas on the actual mechanics of marking this historic event and await the avalanche of advice and other constructive comment. Contact Barry Risely VK7KAD who will pass on your ideas.

3 In the northern part of the state it is hoped to recreate the early trans Bass Strait VHF experiments when on Sunday 5th March 1950 VK's 7PF, 7DB, 7AM and associate Rex Summers operated from Mt Barrow using 144 MHz portable equipment and attempted to contact VK's 7DH and 7AJ. Although the transmitter caused the team problems due to lack of voltage from the generator, the reception of signals from 7AJ/7DH at S8 and 7LH from Western Junction at S7. Part of the equipment used on Mt Barrow is still available and will be brought out from retirement for the occasion.

The "Hamfest" will not be just a nostalgic journey into the past but will, if all plans succeed, be an up to date display of amateur radio techniques and equipment. The NW coast UHF ATV group, the RTTY, Satellite and Computer Groups will be displaying their equipment and skills. Trade exhibitors have been invited to attend. There will be some informal social functions on site and the whole weekend will be a season for special awards and certificates for amateur radio activities. All are asked to give support, assistance and participation to ensure this "Hamfest" is worthy of celebration 75 years hence.

Ken VK7DY is QTHR in the callbook and is the Hamfest Convenor. Contact him today.

The above notes supplied by Barry VK7KAD, Publicity Officer, TARC 85.

75TH ANNIVERSARY YEAR POSTER COMPETITION

The "William Otty Displays" being prepared by the Federal office for use by Divisions/Clubs/Groups for displays, open days etc, require some fresh poster material.

In order to meet this need it was decided to run a competition aimed at finding, amongst our members and their immediate families, ideas for posters that would have a "timeless" theme to promote amateur radio and the Institute in the years ahead.

The rules have been kept as simple as possible:

The designs submitted can show any facet of the hobby, but must include some reference to the Institute, ie the "official" badge and the words "amateur radio".

Colours of course will be expected, but these could be added later by a ghost artist.

Size: The final posters will be of a uniform size, 18" x 30". It is possible to have smaller designs redrawn, but it is preferable that entries be to this size.

All designs submitted become the property of the Institute.

More than one entry can be submitted.

Entries close first post on 11th March 1985 and should be sent to the Secretary WIA, PO Box 300, South Caulfield, Vic. 3162.

Each entry must carry the name and address of the designer followed by the sponsoring members callsign, name and address.

The decision of the judges will be final and no correspondence will be entered into.

A prize of a voucher for $100 will be awarded to the design considered by the judges to reflect the aims of the contest. Minor prizes will be given.

75TH ANNIVERSARY SUBSCRIPTION RENEWALS

It was announced in the January issue of AMATEUR RADIO on page 5 that each 75th subscription renewal for 1985 would receive a small gift pack and be placed in a draw for a Citizen Quartz clock, featuring dual time zones and temperature readouts.

Further to this, during the handling of subscription renewals for 1985, the Federal Office have established the following list of members who have qualified so far:

G P Smith VK1ZEI, L N Tate VK3KLT, R W Elliott VK1ZAH, J Curran VK2AAV, R H Banks VK2DHY, R J Richards VK2BRR, P G Spain L20311, C S Wallis VK2DQE, A S Rowe VK2XAJ, D G McPherson VK2NKM, C F G Withers VK2BVI, B G Gillard VK2VSN, F W Tam VK2TAM, Mrs J Daridge VK2VYP, P D Cannon L20284, D F Wickens VK2DWX, G W Alderton VK2YET, A L Ward VK3DAW, A Kadenbach VK3PBN, S E Widgery VK3SE, EJA Chittick VK3AUB, D L Park L30003, S P Martin VK3DQL, A E Mensforth VK3AAB, H C Thomson VK3BZE, A M Carman VK3AQH, T E Manks VK3TZ, L R Ferris VK3ZLL, H J Masefield VK3NXQ, S G Jones VK3YVL, J T Low VK3NNJ, J D Cash VK4VBQ, E K Chippindall VK4XR, L Eliason VK4EH, K J McKenzie L40114, J H Jones VK4QR, D C Inall VK4VLJ, G J Westcott VK4KCW, L J Murray VK4LO, S Demchenko VK6UC, G L Rogers VK6RO, F A Page L60354, K E C Gillon VK6ZA, M K Johnson VK6LC, F J Walsh VK5NJW, B S Clarke VK5BS, H R Hodgson VK5AP, C R Willmer VK5NWE, T L Greig VK5PTL, L F Battersby VK5NEN, T M Dangerfield VK5ATD, A C Barwick VK7TD, A J Tulk VK7ZTA.

REMEMBER:

The final date for members to be eligible for this gift pack draw is the 21st February, 1985, and your membership renewal must be received at the Federal Office before this closing date.

AR

ANNUAL SUBSCRIPTION, THE WHY OF IT.

Why should I renew my subscription? You have heard that question before, a dozen times.

Apart from the obvious answers — you get AR, the QSL bureau, the bookshop facility, the repeater networks and other facilities — a very significant reason is buying insurance in your hobby. *Without the WIA would there be an amateur service in Australia today?*

Possibly, but not the service we enjoy. Certainly not all the privileges that we enjoy that make us the envy of amateurs in most other countries. It comes as a bit of a surprise to read and hear of the restrictions placed on amateurs in other countries.

Did you know in Japan, an amateur has to receive permission to modify his/her station — have it inspected — and pay for it.

Many countries do not have a novice licence.

Some countries, including the USA, have phone and CW segments designated by regulation, not by Gentlemen's Agreements.

In the UK and some European countries only the licensee can use the microphone at the station.

WARC79 bands (10, 18, 24MHz) were allocated some years ago to VKs, but other countries, amateurs have only portions or none at all.

It goes on and on.

So you "lucky country" amateurs, lend your weight to the organisation that has done so much in the past and is continuing to do so at all levels of Government, both National and State, now and in the future. Make your Institute strong with your support, renew your subscription now, then enrol a friend.

REMEMBER THE FEBRUARY ISSUE OF AR IS THE "CUT OFF" EDITION FOR UNFINANCIALS, please renew as promptly as you can to ensure that your privileges of membership are not interrupted.

Agfachrome-Speed.

The brilliantly simple one sheet, one bath process. Colour prints from transparencies now even easier than black and white.

Try it now! AGFA-GEVAERT

THE VK5 LOW NOISE 2 METRE PREAMPLIFIER

Craig Maitland VK5ZAW
10 St Albyns Avenue, Toorak Gardens, SA 5065

This kit has been produced after many requests for an easily constructed low noise high performance switched preamp for use in all situations. These include mast-head mounting (the best position), shack mounted, or inside transceivers if room permits. All components required are supplied by the VK5 Equipment Supplies Committee as a complete kit.

In use this preamp has shown its value by lowering overall system noise figure as much as 10 dB in some cases and a minimum of 3 dB when put in front of an already modified unit using a 3N210 dual gate FET in the front end. A typical amateur transceiver was improved by 4-5 dB.

Performance specifications are as follows, measurements being made using a HP8970A automatic noise figure meter.

Gain — nominally 20 dB with 6 dB pad supplied.
Noise figure — less than 1 dB, typically 0.6 — 0.7 dB.
Through loss 0.2 dB.
Through SWR — 1.05:1 at 50 ohms.
Maximum power handling 100 W — limited by relay isolation. For higher power use separate coaxial relays.
Size — 50 mm x 68 mm.

Normally DC switched but has inbuilt RF sensing for safety. Can be RF switched for AM or FM but must be DC switched for SSB as no hang switching was incorporated; this mode is undesirable. Circuit board may be cut in half if straight pre-amp without relay switching is desired.

CIRCUIT

The ubiquitous Philips BF981 is used. At a price of about $1.50 it is difficult to beat for performance/dollar. The input uses an adjustable matching system that will match for minimum noise figure and allow for inconsistencies in coil winding, FET spreads and varying antenna loads. This is preferable to the tapped coil method which is very difficult to adjust for optimum performance without the aid of specialised test equipment.

The 6 dB attenuator can be varied in size according to the requirements but less than 6 dB is not recommended as any gain over 20 dB gives diminished improvements even for the deafest systems.

How much gain is actually needed? Assume a typical transceiver has a noise figure of 6 dB. If we use a preamp of 20 dB gain and 0.7 dB noise figure then the overall noise figure will decrease to 0.81 dB — a large improvement. If we lower preamp gain to 15 dB, the total noise figure would now be 1.04 dB, still an excellent figure. If we run the preamp at maximum gain of 26 dB, the system noise figure is now 0.73 dB, only 0.08 dB better than at 20 dB.

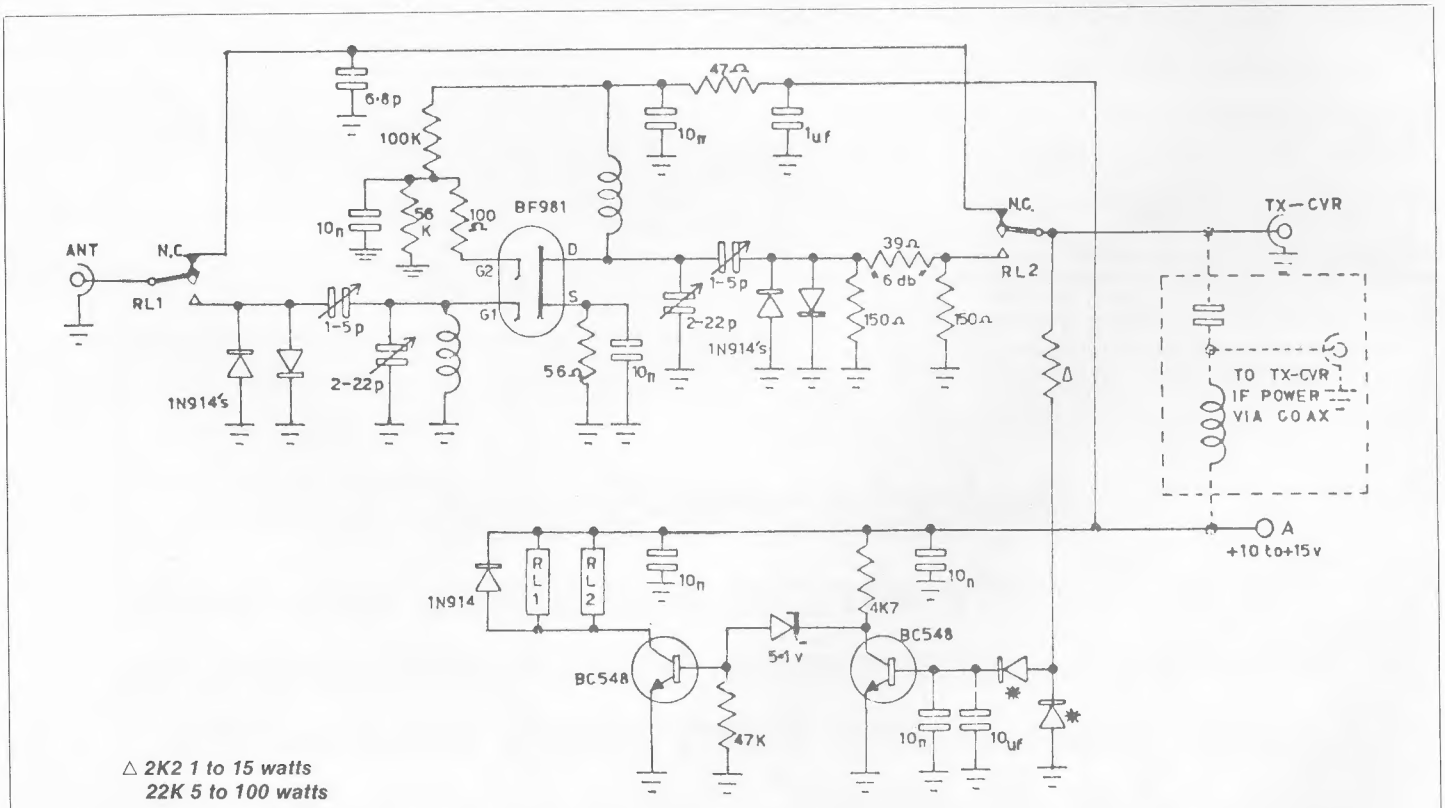
If you have a quiet location in the country, then use all the gain you want but in the city, use the lowest gain possible consistent with low overall noise figure or the receiver front end will suffer from adjacent strong signals, paging systems etc.

Typical gain required during testing was about 15 — 18 dB. A few words about the preferred mounting position may now be in order. With any system, any attenuation of the signal between antenna and receiver will degrade overall noise figure by that amount. If we have 3 dB loss in coax, connectors, diode switching etc. then we cannot obtain a total noise figure of less than about 3.8 dB. But if the preamp is mounted at the antenna, then a minimum noise figure of about 0.8 dB is achieved. These figures are used as an example only to show how important it is to mount the preamp as close to the antenna as practicable. More details on how to find the required gain figure are explained with the kit.

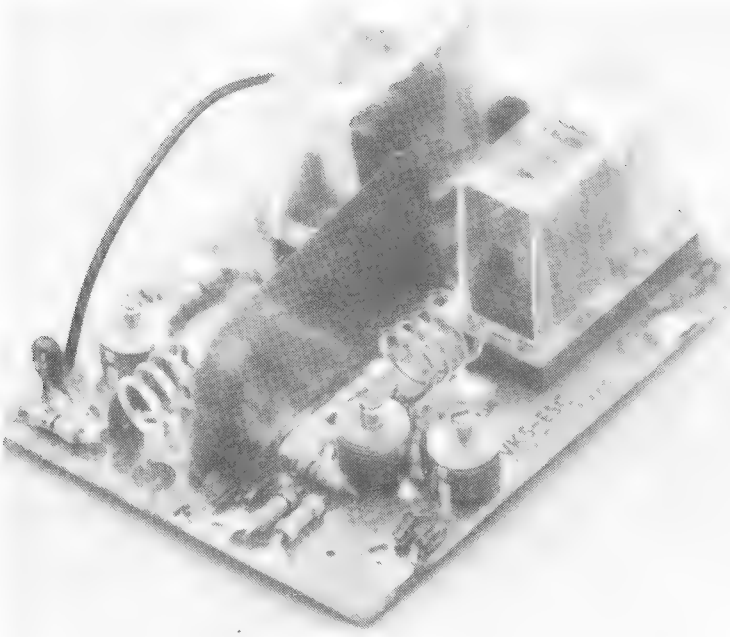
RELAYS

The relay switching system used has been made flexible to suit varying requirements. Obviously the best system is to switch the relays on and off the receiver PTT line. If this mode is used, +10 to 15 V is switched to point A during receive.

If the preamp is required to be powered via the coax, a decoupling network is used in the preamp and also at the transmitter. Unswitched +10 to 15V can also be used, relying on the RF sensing network to do the switching. This part of the circuit will then deactivate the preamp during transmit, connecting input straight though to output. The RF network will switch from as low as 1 watt to a max of 100W by



VK5 — 2 metre Low Noise Preamp. VK5ZAW — VK5ZJA.



altering one resistor and two diodes to suit the power used.

Why have not we used a new technology device such as a GaAsFET? One good reason is the cost of the device used is about $1.50, whereas even when bulk-purchased GaAsFETs are still about $6.00. At the design frequency of 144 MHz, the BF 981 has so far proved to be the equal of any other devices yet measured. This may not be the case at higher frequencies but at 2 metres the BF 981 is more than adequate.

.The full kit, PCB, components, coil winding wire etc, is available for a price of $25.00. Full construction and alignment details are given with the kit.

Postage is included in the price for SA members, $2.50 elsewhere. Orders should be addressed to the VK5 Equipment Supplies Committee, 3 Coral Sea Road, Fulham SA 5024.

ADDENDUM

It has come to our attention that some amateurs have experienced difficulty with powering the unit via the coax. This is due to a combination of poor selection of decoupling components and high power output transmitter.

As these components were not supplied with the kit, no suggestions were made on how to decouple the coax.

The suggested ferrite to use is an F29 slug with 12 turns of fine enamelled wire approximately 30 gauge wound around the outside in the threads, held in place with a drop of superglue if necessary. The decoupling capacitors must be good quality RF types such as chip capacitors, discs, polyester types — not greencaps, as they are only good for audio frequencies. The same network is used at both ends.

If top quality capacitors are not available, try paralleling a couple of different values or types and keep all leads extra short.

There have been a few reports of the preamp not switching when RF actuated. Investigations show that in most cases this has been due to the SWR protection being too fast in the transceiver and actuating during the changeover of the relay contacts of the preamp. The 10 uF on the base of the switch transistors was put in to help but in some cases the only cure is to DC switch the preamp, which is to be preferred anyway. As most transceiver PA transistors are very rugged, slowing down the SWR protect sensing circuit will cure the problem if RF switching is essential.

Don't forget that the absolute maximum power rating is 100 W — due to the limited isolation of the relays used. Any higher power and the FET could be damaged. Use proper coaxial relays with sequential switching if you want to run greater than 100 W.

AR

HAVING FUN IN A FUN RUN

Sam Voron recently participated in the "Bridge to Breakers" Fun Run. During the run Sam operated on 147 MHz FM.

Sam's certificate of achievement read "This is to certify that Sam, with 2m amateur radio backpack, completed the run of 14 km from the Sydney Harbour Bridge to Manly Beach on Sunday 26 August 1984 in 92 minutes."

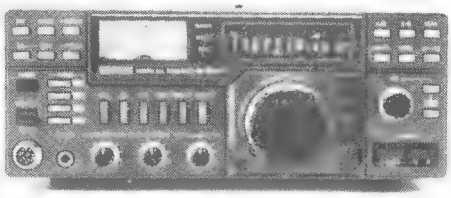
During the run Sam stopped to speak with SES volunteers using VHF to co-ordinate the run.

Many runners were quite amazed to see this new twist to their sport.

Sam is now eager to know when the next run will be on.

AR

THE WORLD CLASS 2 METRE BASE



Do you remember the IC-211? The boys at ICOM do. You see, it set the pace for 2 metre base station performance many years ago. Optically chopped tuning, processor control, digital PLL, and many features at that time unheard of. In 1984 ICOM are still setting the same high standards for 2 metre base station performance. Dual VFO's, multi mode, 10 Hz PLL tuning are a few of the basic features. This world class radio is supported by a large range of options, many can be seen at your local ICOM dealer.

ICOM
The World System
Look for the Dealer list in this magazine or phone ICOM on (03) 51 2284

ICO06

MORSE TRAINER PROGRAMME — C64

Neil Cornish, VK2KCN,
56 Sherwin Avenue, Castle Hill, NSW, 2154

The majority of amateurs have greatest difficulty in Morse receiving and this programme uses the Commodore 64 to produce good Morse at any speed and with a number of good learning aids included.

The main menu of the programme has the following options.

f1 . . SEND CW FROM KEYBOARD

In this mode, the speed is selected and the CW of typed letters is generated by the computer. You may type-ahead to the limit of the keyboard buffer

f2 . . RECEIVE PLAIN TEXT

When selected, this mode sends plain text from memory at the speed selected. It is possible to increase the spacing between each character whilst maintaining character speed. The text in memory begins with the sample exam for 10WPM listed in the Amateur Operators Handbook.

You may add your own text in DATA statements at the end of the programme in lines beginning at 4210 etc. If you do so, you should increment the two "11" in line 200 by the number of DATA lines you add.

f3 . . DISPLAY CODE ON SCREEN

This is a graphic display of the code.

f4 . . RECEIVE RANDOM GROUPS

This is possibly the most useful mode because it generates Morse for groups of five "words" either letters only or letters and numbers. The speed may be varied and the spacing between each character may be varied which allows the student to hear the character at the correct speed but gives a little more time for recognition. The number of "words" in a session can be varied and at the end of the session the "words" are displayed together with the time taken for sending. It should be noted that because random groups have more of the longer Morse characters than plain text, the time taken for say, ten "words" at 10WPM, is a little longer than one minute

f5 . . RECEIVE RANDOM CHARACTERS TWICE

The random characters can be letters only or a mixture of letters and numbers. Details as for f4

f6 . . PRACTICE TAPE MAKER

In this mode, you may enter some text at any selected speed and then the computer will generate the CW for that text. This is useful in making practise tapes or for educators who wish to prepare lesson tapes. The output can be recorded on a simple cassette recorder.

f7 . . RANDOM GROUPS OF SELECTED LETTERS

Here you can input the letters or numbers which you find difficult and the computer sends random groups of the selected characters only. Details as for f4.

f8 . . FINISHED WITH PROGRAMME

No explanation required.

Generally, when the computer is about to send Morse, a five second countdown on the screen is given and the CT and AR codes are sent to indicate the start and end of the test. From within each mode, return to menu is achieved with f7 and alterations of speed, spacing etc with f8.

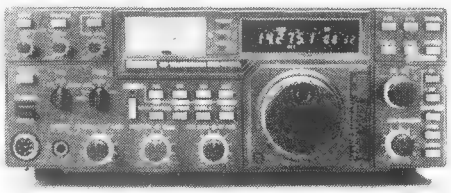
If you can't hack the typing, $5 for a tape or $10 for a disk to the author will get you the programme. A VIC-20 version is also available. **AR**

```
100 REM[ C.W.I.                    ]
110 PRINT"[ ]":POKE53280,5:POKE53281,3
120 W$="ABCDEFGHIJKLMNOPQRSTUVWXYZ":W1$=W$+"0123456789":U$="[ ] F7=MENU [ ]"
130 S=60:SD=54272:FORDS=SDTOSD+24:POKEDS,0:NEXTDS
140 POKESD+5,0:POKESD+6,240:REM   A.D.S.R.
150 POKESD+1,47:POKESD,100:REM PITCH
160 POKESD+21,200:POKESD+22,50:REM  CUTOFF FREQ.
180 POKESD+24,47:REM  VOLUME & FILTER
170 POKESD+2,0:POKESD+3,8:REM PULSE WIDTH
180 DIMM$(90):FORI=40TO90:READM$(I):NEXT:M$(32)=" ":M$(45)="111":M$(46)="111313"
190 FORI=1TO8:READA$(I):NEXT
200 DIMD$(11):FORI=1TO11:READD$(I):NEXT: REM**THE NUMBER OF TEXT DATA LINES**
210 REM[ ]
220 PRINT"[ ]":PRINTTAB(11)"[ ]MORSE  TRAINER*":PRINT"[ ]":
230 S=35:D$="CQ CQ DE VK2KCN  K":LETL=LEN(D$):FORI=1TOL
240 M$=MID$(D$,I,1):PRINT"[ ]"M$;:GOSUB1590:NEXT:PRINT"*"
250 PRINTTAB(12)"[ ] COMMODORE 64 "
260 PRINTTAB(8)"[ ]*NEIL CORNISH VK2KCN*":FORI=1TO3000:NEXT
270 REM[ ]
280 PRINT"[ ]MENU,SELECT FUNCTION[ ]":PRINT:FORI=1TO8:PRINT"F";A$(I):NEXT
290 PRINT:PRINT"DURING THE PROGRAM,":PRINT:BB=0
300 PRINT"TO RETURN TO THE MENU PRESS [F7] "
310 PRINT"[ ]TO ALTER SPEED ETC    PRESS [F8] "
320 G=1:GOSUB640:A=ASC(A$)-132:IFA<10RA>3THENG=0
330 IFA=8THEN720
340 TA=INT(39-LEN(A$)/2)
350 G=0:PRINT"[ ]"TAB(TA)A$:FORI=0TO39:PRINT" ";:NEXT
360 PRINT: PRINTU$:PRINT:GOSUB700
370 ONAGOTO380,550,1050,1?0,0,460,0,0,1,10,700
380 REM[ ]
390 GETA$:IFA$()""THENB$=B$+A$:PRINTA$
400 IFA$=CHR$(136)THEN 280
410 IFA$=CHR$(140)THENGOSUB700
420 IFB$=""THEN380
430 M$=LEFT$(B$,1):GOSUB1590
440 IFLEN(B$)=1THENB$="":GOTO330
450 B$=RIGHT$(B$,LEN(B$)-1):GOTO380
460 REM[ ]
470 GOSUB750
480 FORAB=1TO10:D$=D$(AB)
490 FORQ=1TOLEN(D$):GETC$:IFC$=CHR$(136)THEN280
500 GETC$:IFC$=CHR$(140)THENGOSUB700
510 M$=MID$(D$,Q,1):M$=M$:GOSUB1590:PRINT"[ ]";:NEXT:PRINT:FORC=1TO7*S:NEXTC:NEXTAB
520 PRINT:PRINT"PRESS [ ]SPACE[ ] TO CONTINUE"
530 GETAC$:IFAC$<>" "THEN530
540 GOTO280
550 REM[ ]
560 D$="[ ]   [ ]":DT$="[ ]":K=0
570 FORI=43TO90:K=K+1:IFK=10THENGOSUB620
580 PRINTCHR$(I);TAB(2);:FORJ=1TOLEN(M$(I))
590 IFMID$(M$(I),J,1)="3"THENPRINTDT$;
600 IFMID$(M$(I),J,1)="1"THENPRINTDT$;
610 PRINT" ";:NEXT:PRINT"[ ]":NEXT:GOSUB620:GOTO280
620 REM[ ]
630 PRINT"PRESS [ ] SPACE [ ] ":K=0
640 GETA$: IFA$="" THEN640
650 IFG=1THENRETURN
660 PRINT" [ ]                                    ":PRINT "[ ]" :K=0:RETURN
670 K=K+1:IFK>40THENK=0
680 K=K+1:IFK>20THENPRINT" [ ]":GOTO640
690 PRINT"[ ] [ ]";:GOTO640
700 REM[ ]
710 PRINT:INPUT"[ ]SPEED IN W.P.M.[ ]   10[ ]":S:S=235/S:RETURN
720 REM[ ]
730 S=35:PRINT"[ ]":C$="GOOD LUCK 73 DE NEIL VK2KCN  K":LETL=LEN(C$):FORI=1TOL
740 M$=MID$(C$,I,1):PRINTM$;:GOSUB1590:NEXT:END
750 REM[ ]
760 PRINT"[ ]STANDBY FOR CW IN "
770 FOR SB=250TO0STEP-1
780 IFSB/50=INT(SB/50)THENPRINT"[ ]":SB/50
790 NEXT:PRINT:RETURN
800 REM[ ]
```

```
810 SS=735/S:S=S*.8
820 REM
830 PRINT:PRINT"■SPACING ENTER 0-50■   0■■■■":
840 INPUTBB:IFBB<0ORBB>50THEN840
850 INPUT"■LETTERS ONLY  Y/N ■   Y■■■■";Y$:IFY$="Y"ORY$="N"THEN870
860 GOTO850
870 R$=W$:W=26:IFY$="N"THENR$=H1$:H=38
880 PRINT
890 INPUT"■HOW MANY WORDS■   10■■■■■";Z
900 GOSUB750
910 PRINT"■SPACE=";BB;"WORDS=";Z
920 M$="+":GOSUB1590:FORI=1TO7*S+BB*S:NEXT:TI$="000000"
930 FORHH=1TOZ
940 FORQQ=1TOS
950 R=INT(RND(1)*W)+1:M$=MID$(R$,R,1):MM$=M$:GOSUB1590
960 PRINTMM$;
970 NEXTQQ:PRINT" ";:FORD=1TO7*S+BB*S:NEXTD:NEXTHH
980 M$="*":GOSUB1590:PRINT:PRINT
990 L$=MID$(TI$,3,2)+" MIN. "+MID$(TI$,5)+" SEC.":PRINTZ"WORDS IN"L$
1000 PRINT:PRINT"SAME AGAIN=[SPACE]":PRINT"ALTER    =[F8]":PRINT"EXIT   =[F7]"
1010 GETH$:IFH$=""THEN1010
1020 IFH$=CHR$(140)THENGOSUB1700
1030 IFH$=CHR$(1[illegible]
1040 GOTO660
1050 REM■ DOUBLE LETTERS ■
1060 PRINT:PRINT"■SPACING? 0-15■   0■■■■":
1070 INPUTAA:IFAA<0ORAA>15THEN1060
1080 INPUT"■LETTERS ONLY■   Y■■■■";Y$:IFY$="Y"ORY$="N"THEN1100
1090 GOTO1080
1100 PRINT"■ALTER SPACE PRESS [F8]■":GOSUB750
1110 AA= 40*AA:R$=W$:W=26:IFY$="N"[illegible]
1120 FORHH=1TO8
1130 FORQ=1TO5:GETL$:IFC$=CHR$(1[illegible]
1140 IFC$=CHR$(140)THENGOTO 1060
1150 R=INT(RND(1)*W)+1:M$=MID$(R$,R,1):[illegible]
1160 PRINTMM$;:M$=MM$:GOSUB1590:FORD=1TOAA:NEXTD
1170 NEXTQ:PRINT" ";:FORD=1TO2.5*AA:NEXT:NEXTHH
1180 PRINT"■■■■PRESS 'SPACE' TO CONTINUE"
1190 GETH$:IFH$=""THEN1190
1200 PRINT"■■■":GOTO1060
1210 REM■ SPECIAL SEND KEYBOARD ■
1220 INPUT"■DELAY  1 TO 50 ■   1■■■■";DL:IFDL<1ORDL>50THEN1220
1230 PRINT: PRINT"ALTER SPACE..[F8],  OR EXIT..[F7]":XT$=""
1240 PRINT"■ ■ TYPE IN TEXT & PRESS [RETURN] TO SEND■"
1250 GETTX$:IFTX$=""THEN1250
1260 IFTX$=CHR$(13)THEN1290
1270 IFTX$=CHR$(140)THENRUN1020
1280 IFTX$=CHR$(1[illegible])THENTX$=XT$:PRINT:GOTO1300
1290 PRINTTX$;:XT$=XT$+TX$:GOTO1250
1300 GOSUB750:M$="+":GOSUB1590:FORI=1TO4*7*DL:NEXT
1310 FORI=1TOLEN(TX$)
1320 M$=MID$(TX$,I,1):GOSUB1590:FORI=1TO4*7*DL:NEXT
1330 PRINTMID$(TX$,I,1);:NEXTI
1340 FORI=1TO5*7*DL:NEXT:M$="+":GOSUB1590:GOTO1250
1350 REM■ 2000 RANDOM LETTERS ■
1360 SS=735/S
1370 PRINT:PRINT"■SPACING, ENTER 1-15■   1■■■■":
1380 INPUTAA:IFAA<1ORAA>15THEN1370
1390 AA=40*AA:PRINT
1400 INPUT"■HOW MANY WORDS■   5■■■■";Z
1410 IFH$<>CHR$(140)THEN1440
1420 INPUT"■SAME LETTERS  Y/N■";Y$
1430 IFY$="Y"THEN1450
1440 INPUT"■PROBLEM LETTERS■";PR$:IFPR$=""THENPRINT"?":GOTO1440
1450 LETPR=LEN(PR$)
1460 PRINT"■SPACE=";AA/40;"WORDS=";Z:GOSUB750
1470 M$="+":GOSUB1590:FORI=1TOAA*7:NEXT
1480 FORHH=1TOZ
1490 FORQ=1TO5
1500 R=INT(RND(1)*PR)+1:M$=MID$(PR$,R,1):MM$=M$:GOSUB1590:FORD=1TOAA:NEXTD
1510 PRINTMM$;
1520 NEXTQ:PRINT" ";:FORD=1TO5*AA:NEXT:NEXTHH
1530 M$="*":GOSUB1590
1540 PRINT: PRINT"■REPEAT=[SPACE]..ALTER=[F8]..MENU=[F7]
1550 GETH$:IFH$=""THEN1550
1560 IFH$=CHR$(140)THEN1[illegible]0
1570 IFH$=CHR$(136)THEN 280
1580 PRINT:GOTO1460
1590 REM■ SOUND GENERATOR ■
1600 IFM$=" "THENFORD=1TO5*7:NEXTD:RETURN
1610 IFASC(M$)>90THENRETURN
1620 M=ASC(M$):M$=M$(M)
1630 FORL=1TOLEN(M$)
1640 E=VAL(MID$(M$,L,1)):POKE50+4,65:REM  WAVEFORM - TURN ON
1650 FORD=1TOE*S:NEXT
1660 POKE50+4,64:REM  WAVEFORM - TURN OFF
1670 FORD=1TOS:NEXTD
1680 NEXTL
1690 FORD=1TO3*S+BB*S:NEXTD:RETURN
1700 REM■ HELP ■
1710 PRINT"■ALTERNATIVES AVAILABLE■"
1720 PRINT"■1..SPEED":PRINT"■2..SPACE":PRINT"■3..WORDS"
1730 GETAL:IFAL<1ORAL>3THEN1730
1740 IFAL=1THEN1770
1750 IFAL=2THEN1780
```

Continued page 12.

THE NEW WORLD CLASS OF HF



Who would have believed that ICOM engineers could have improved the IC-720A. Now, not only do you have features such as the general coverage receiver, but now, in the IC-751 you get all modes including FM, transmitter incremental tuning (XIT), scanning and of course the tuning system made famous by Collins. Perhaps the most amazing fact is the 105 dB dynamic range, offered by the new J-FET ICOM front end.

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IC007

```
1760 PRINT"■■NUMBER OF WORDS■";:INPUTZ:GOTO1790
1770 GOSUB700:S=S*.8:GOTO1790
1780 PRINT"■■SPACE  0-50■";:INPUTBB:IFBB<0ORBB>50THEN1780
1790 INPUT "■■OTHER ALTERN  Y/N■";Y$
1800 IFY$="Y"THENRETURN
1810 IFY$<>"N"THENPRINT"■■N RELOD ■":GOTO1790
1820 RETURN
4000 DATA313313,313313,131313,313133,311113,131313,31131
4010 DATA33333,1[illegible],11111,31111,33111,33311,33331
4020 DATA333111,31131,111313,11111,[illegible],131[illegible]
4030 DATA13,3111,3131,11 1,1131,3 1,1111,11,1,33,31,1311,33,31,333,1331,3313
4040 DATA131,111,[illegible],111,1133,3113,313,3311
4050 DATA1..SEND CW FROM THE KEYBOARD.,3..DISPLAY CODE ON SCREEN.
4060 DATA5..RECEIVE RANDOM CHARACTERS TWICE.
4070 DATA7..RANDOM GROUPS OF  SELECTED LETTERS.
4080 DATA2..RECEIVE PLAIN TEXT.,4..RECEIVE RANDOM GROUPS.
4090 DATA6..PRACTISE-TAPE  MAKER.  5..FINISHED WITH PROGRAM.
4100 DATA+ THE SKIING SEASON HA  STARTED AND 156 MILLIMETRE  OF SNOW HAS FALLEN
4110 DATA ON MOUNTAINS ABOVE 1 4 9 7  METRES ALL MOTORISTS ARE REQUESTED TO
4120 DATACARRY CHAINS  [illegible] ARE OPERATING DAILY APPROXIMATELY 4 2  CARS WENT
4130 DATA THROUGH EARLY FRIDAY MORNING PICNICKERS AND SKIERS MADE UP 3 7 PER
4140 DATA CENT OF THE VISITORS ¥
4150 DATA PEAK AT 270 DEGREES THE CARRIER FREQUENCY CHANGES TO ITS LOWEST
4160 DATAVALUE FINALLY WHEN THE MODULATING CYCLE IS COMPLETE AT 360 DEGREES THE
4170 DATACARRIER IS BACK TO ITS CENTRE FREQUENCY WE CAN THUS SEE THE FOLLOWING
4180 DATABASIC CONDITION WITH NO MODULATING SIGNAL THE CARRIER IS AT A FIXED
4190 DATACENTER FREQUENCY A. MODULATION IS APPLIED THE CARRIER FREQUENCY WILL
4200 DATAINCREASE AND DECREASE IN COMPARIS WITH THE ALTERNATIONS OF AF SIGNAL
```

BATTERY DANGER WARNING

Only quick action by doctors had prevented several fatal poisonings after children swallowed small mercury batteries which were now used to power calculators and electronic games.

Dr Geoff Davidson, director of gastroenterology at Adelaide Children's Hospital said stomach acid quickly corrodes the metal casing of the battery.

The result can be battery contents including toxic mercury being released in the stomach.

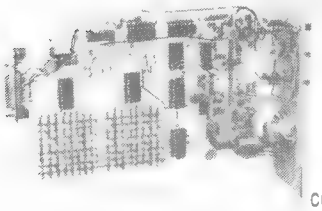
Dr Davidson said his hospital had had about a dozen cases of children aged between two and seven swallowing the batteries in the past year.

The usual procedure when a child swallowed an object was to wait until it passed through the body naturally.

But Dr Davidson said this could be fatal because after five hours the strong acid in the stomach starts to digest the metal battery covering.

He has devised a technique to push the batteries through the stomach into the bowel and then gives the child drugs to induce bowel movement.

AR



ADAPTIVE KEYER

A Van Der Byl VK2EDB
13 Brahma Close, Bossley Park, NSW 2176.

This project arose out of a need to maintain a presence on the 6 m band with a view to getting more contacts especially during times of sporadic E propagation and the band appears dead through sheer lack of occupancy.

With this mind a facility was required such that it would stop keying should the calling frequency become occupied by another station, something that has sorely been lacking in the past

OPERATION

Referring to the block diagram the operation is as follows. A clock which is a 555 which is used as an astable multivibrator drives a twelve bit counter which is a CD4040BP. Output Q1 to Q12 go to logic high in order of binary notation. Q1, Q2 and Q3 drive a de-multiplexer, whose eight outputs, which are normally high, go low in turn as the clock pulses are fed into the counter.

Q4 to Q7 control the multiplexer whose sixteen inputs are selected in turn each time the de-multiplexer goes through a cycle.

When a diode is inserted into the matrix as shown on the block diagram a low logic level is seen by the multiplexer whose output causes the keying relay to operate and either a LED to light up or side tone oscillator to operate depending on S2.

Q8 to 12 of the twelve bit counter are used to control the periodicity of the call, (not necessarily regular) when the required outputs are connected to the AND gate whose output enables the de-multiplexer to produce an output to be keyed.

The calling periodicities can be envisaged from the following table, showing when Q8 to Q12 become logic one.

Q12	Q11	Q10	Q9	Q8	
					←TURN ON
0	0	0	0	0	
0	0	0	0	1	
0	0	0	1	0	40 seconds
0	0	0	1	1	1st call
0	0	1	0	0	
0	0	1	0	1	
0	0	1	1	0	
etc			etc		
1	1	1	1	1	

For example, if the time taken to scan the matrix is 10 seconds and Q8 and Q9 is connected to the AND gate the first call would be at 40 seconds from turning on the power, UNLESS sufficient audio level from the receiver causes the reset relay to operate in turn forcing the counter to reset.

During the time in which the keyer is keying the high logic level from the AND gate is used to inhibit the reset relay from operating. For example in some transceivers a side tone oscillator is used in the CW mode. This would cause the counter to reset when it should not

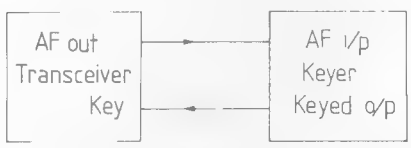
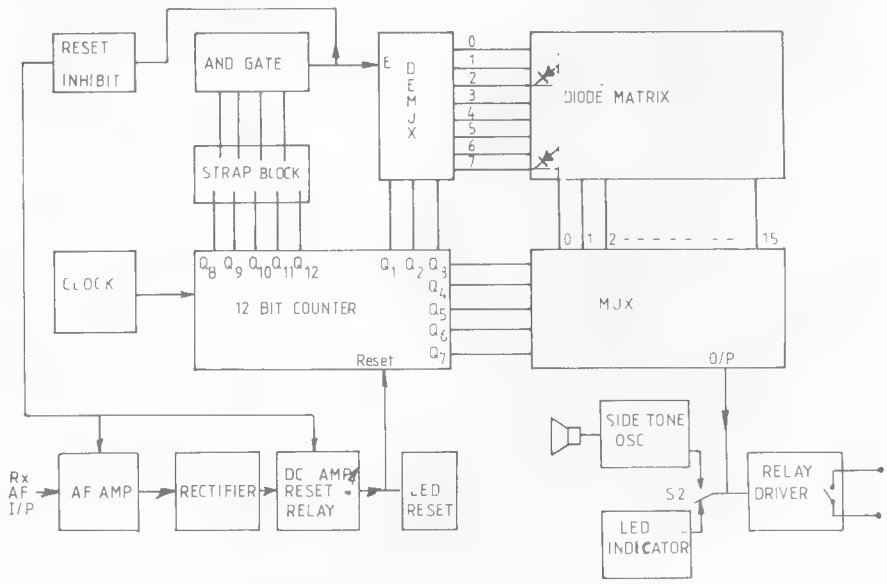


Figure 2 — Adaptive Keyer Utilization



ADAPTIVE KEYER UTILIZATION
Figure 1 — Flow Chart — Block Diagram

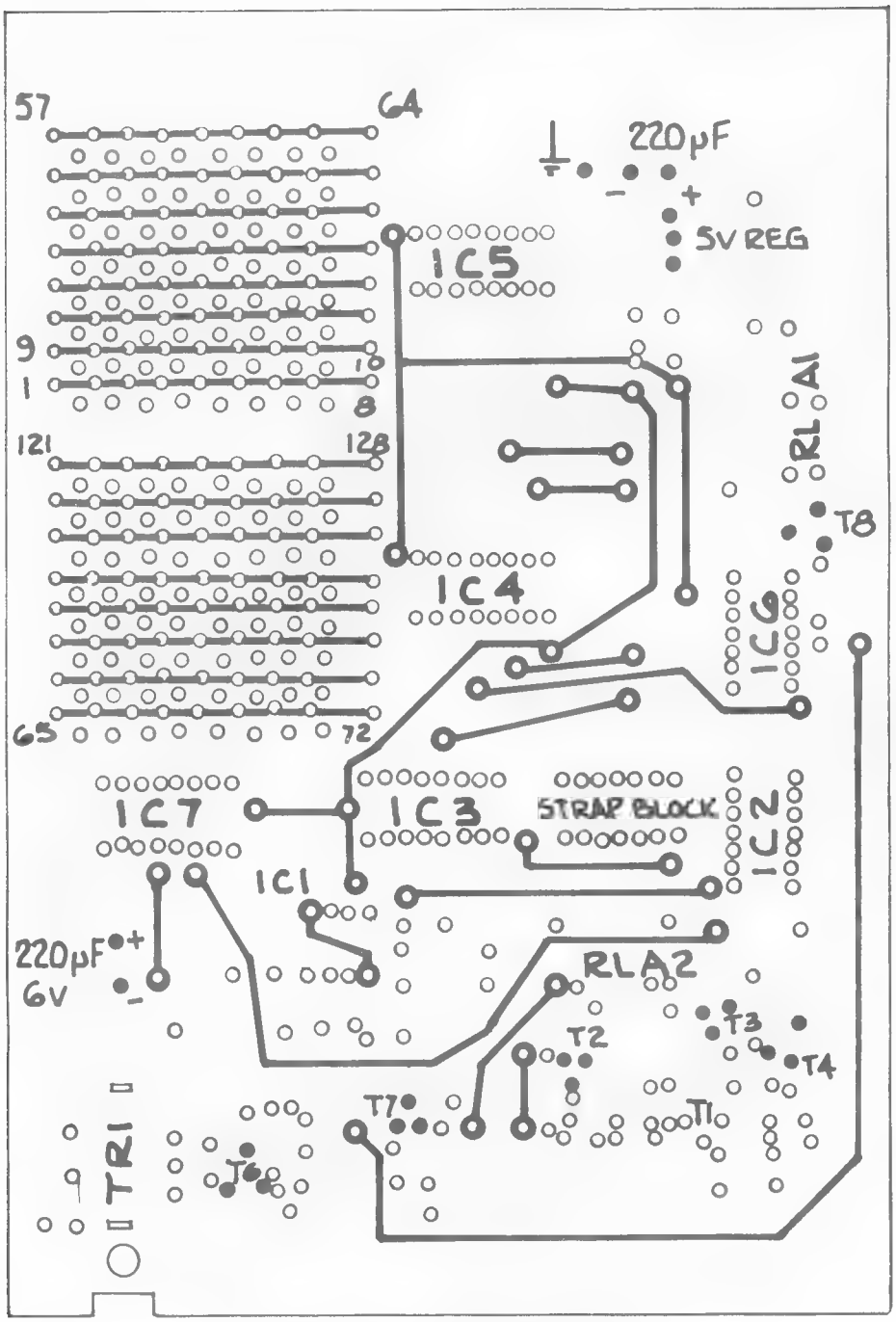


Figure 5 — PC Pattern (component side)
Note: Strap Block could be replaced by DIL switch

The reset inhibit is achieved by causing the 12V rail to be turned off during calling period

CIRCUIT DETAILS

1) CLOCK — IC1 a 555 used as an astable multivibrator whose speed determines the CW speed.
2) COUNTER — IC3 — 12 bit binary counter. CMOS CD4040BP.
3) MULTIPLEXER — IC4 AND IC5 74LS151 and IC6 74LS00 quad 2 i/p AND gate. Gates 1a and 1b cause either IC4 or 5 to be selected under control of Q7. 1d and 1c combine the outputs of IC4 and 5.
4) DE-MULTIPLEXER — IC7 — one of eight demultiplexers. 74LS138.
5) AND gate — 74LS08 here used as a 4 input AND gate.
6) RESET INHIBIT — consists of T3 and T4 when the AND gate output goes high T4 conducts causing the base of T3 to go low hence no supply voltage for RLA2 and T1 and T2.

T5 buffer switch for either side tone oscillator or the green LED.

T7 buffer switch for the Reset LED indicator.

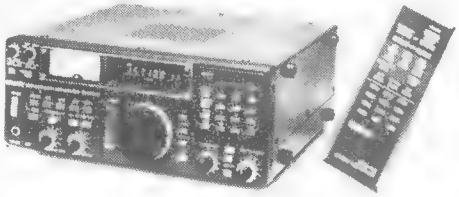
The value of this project in the enjoyment of amateur radio to me is that it saves a lot of calling CQ when this machine does it for me. I simply reap the benefits when a call is received.

PROBLEMS —

No claims are laid upon the use of a diode matrix in a keyer but rather the use of a keyer in a manner that would not drive every other user of 6 metres around the bend

The greatest amount of time was spent on producing a circuit board pattern that didn't require a myriad of wire straps. Full sized circuit board patterns

THE WORLD SYSTEM FOR HF PICK-UP



If you're serious about HF receiving, you will appreciate the features this all mode receiver offers. Key pad entry, 32 memories, scan–the famous ICOM tuning system, and all in the palm of your hand. You see the R71A can be remote controlled from the comfort of your arm chair. ICOM even provide the option of a voice synthesizer. You need to see this radio now.

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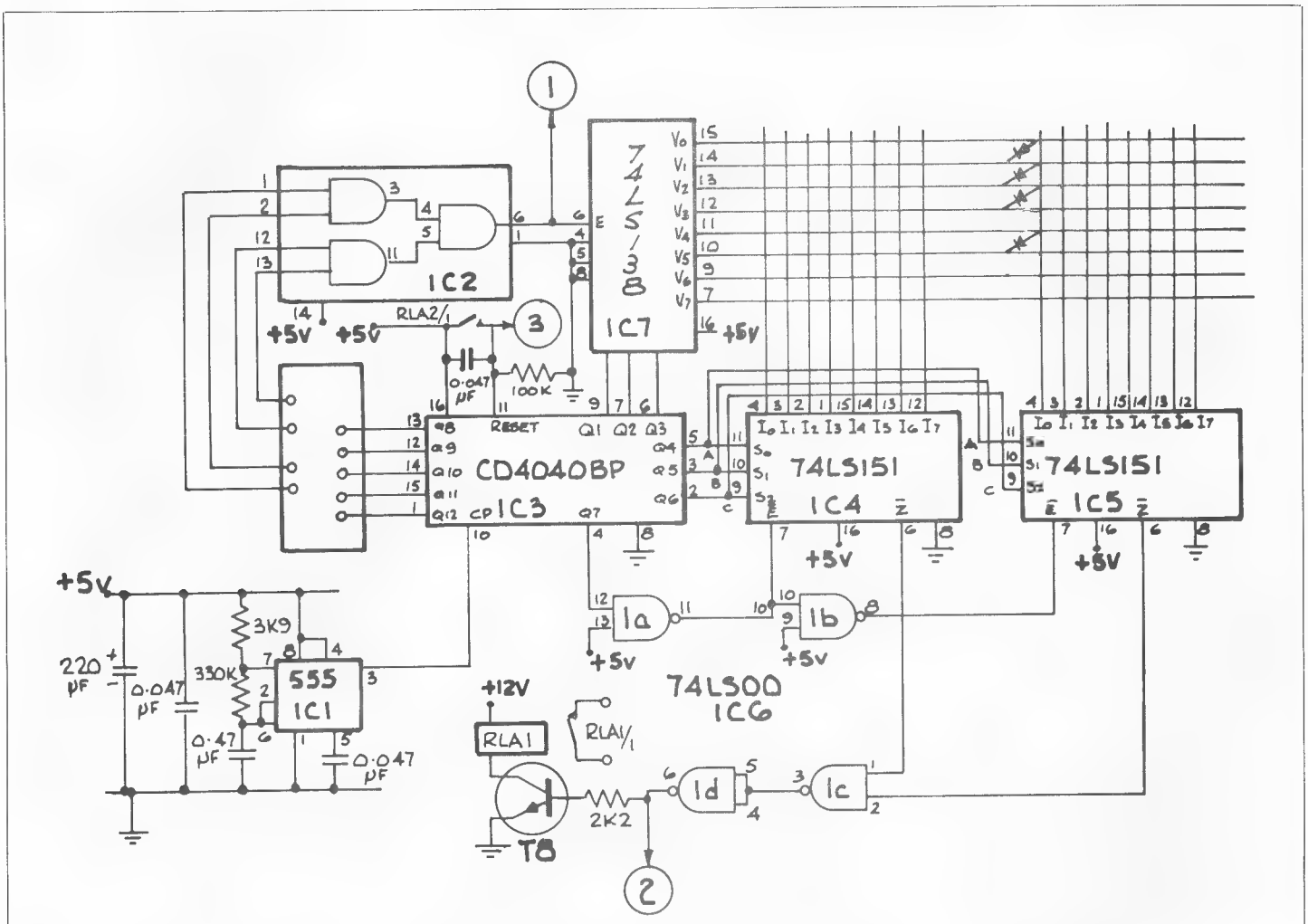

Figure 3 — Circuit Diagram

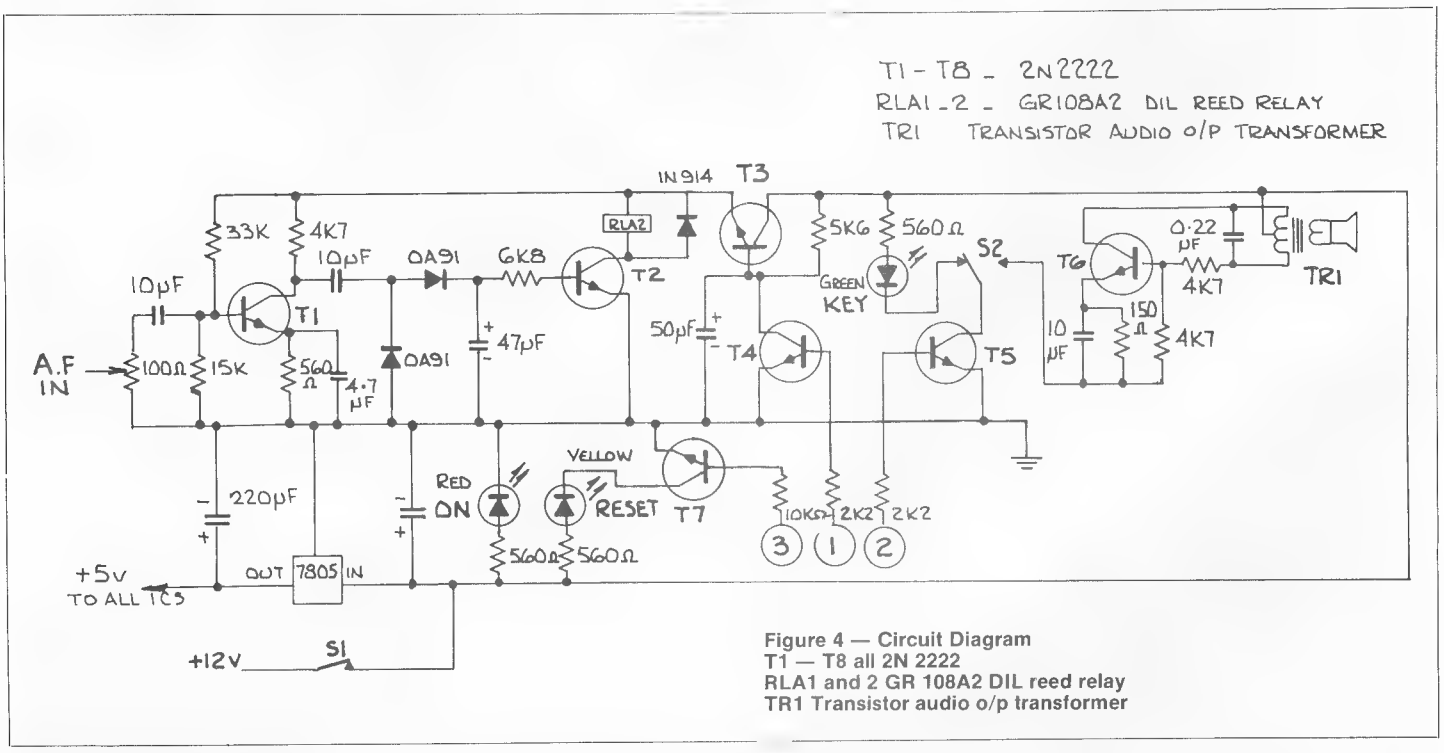

Figure 4 — Circuit Diagram
T1 — T8 all 2N 2222
RLA1 and 2 GR 108A2 DIL reed relay
TR1 Transistor audio o/p transformer

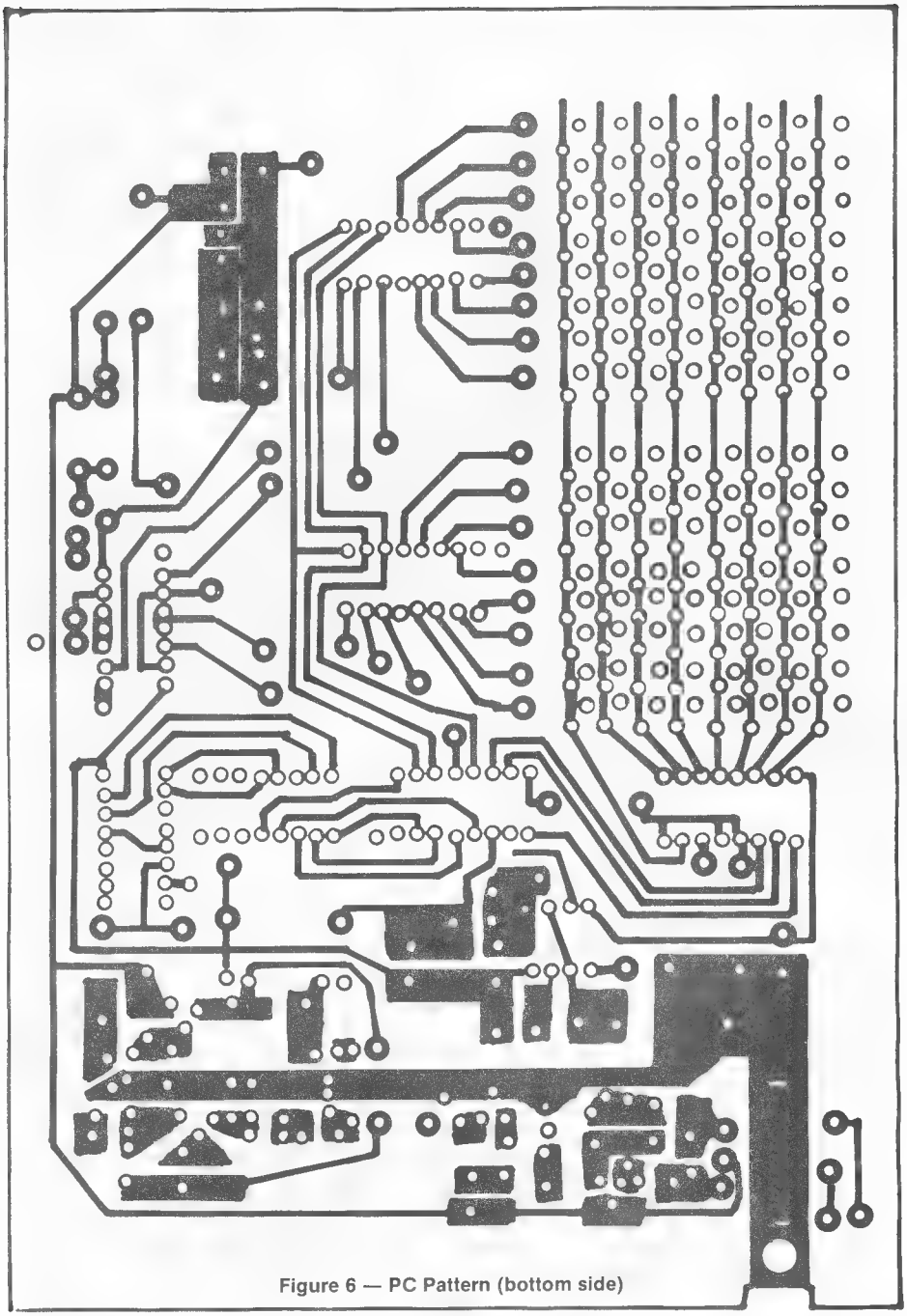

Figure 6 — PC Pattern (bottom side)

are shown in Figures 5 and 6, should any attempt be made to reproduce this project.

BRIEF SPECIFICATIONS

Power consumption @ + 12 V Idle - 50 mA
Keying = 80 mA
Maximum Reet Sensitivity = 100 mV Pk-Pk
Memory Size - 128 bits
Clock Frequency - 8.5 Hz
Message Length = 15 Seconds
Max Call Cycle Length -
32 x Message Length 8 Mins

Comments Reusage

I have found that a period between calls of about 5-6 mins to suit me best.

A mute on the receiver which has good noise immunity is necessary to prevent false resetting of the keyer.

Do not leave it running, unattended lest ye be reproved and proved a nuisance.

BEST PHOTOGRAPHS

DECEMBER & JANUARY

The judges selected the cover photograph of the December magazine and the photograph of Norbert Trupp VK4FXP page 52 in January's magazine.

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Specialist Electronics, 2 Ashwood Pl, Langwarrin Park (03)789 7700

Only our authorized dealers have access to our engineering support facilities. Beware of those selling ICOM quality who are not on this list.
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ICOM
The World System

Other clubs and groups may like to use some of these ideas or devise some of their own from the following information, to help promote amateur radio and the Wireless Institute of Australia in this — our Anniversary Year.

CATCH-22

Or . . . One club's approach to public relations.

Charles Ivin, VK4BPI
36 Tulloch Street, Mackay, Qld 4740

Never move motions at VK4 Divisional Conferences. The Mackay club did. It read, "That the WIA Queensland Division, in co-operation with the Federal body, produce portable visual displays to promote the variety of benefits of amateur radio." The Mackay Amateur Radio Club is small and it was felt the availability of such displays would help in its membership drives. No sooner was the motion accepted on the agenda than the chairman, David Jones VK4NLV, by a combination of sheer flattery and low skullduggery talked the Club into preparing an audio-visual display for presentation at the Conference.

This should have been a warning. After spending long hours in preparation, a slide presentation was shown at the Conference, with pre-recorded commentary extolling the joys of being a member of the radio club. The response was overwhelming . . . so much favourable reaction that the club delegates, in reporting back to the next meeting, made their second big mistake . . . *"Why don't we present a public display in our own city, complete with static display, radio exhibits, video films and a live amateur radio station?"* Suddenly, reality hit. It's easy enough to move motions at Conferences, but somehow, when you find yourselves having to help make them work it seems more difficult!

"No worries!" said President Wally VK4AIV. A sub-committee was set up and a clear plan of attack was mounted. The following comments outline the approach to the challenge.

VENUE

It's important to pick a place where plenty of people visit and facilities will show the display at its best. There seemed to be two possibilities. Shopping centre complexes attract a good cross section of the public but usually have limited room and require a rostered attendance of members to guard the display from undesirable QSOs during working hours. Alternatively, the City Library, which has a large safe display area, plentiful boards and glass presentation cases, a separate small auditorium suitable for video presentations and portable amateur radio stations. Even more, it has an enthusiastic Librarian who'd rather say "CQ" than "QRT"! Therefore, the Library was selected to mount a display over the period of 22-29th September 1984, incorporating two weekends.

STATIC DISPLAY

There were about nine double sided display boards Each side was given a theme or message to convey to the public. Where the subject was more complex, additional sides were used. To facilitate the setting up, all presentations were made on cardboard sheets of various colors, of approximate dimensions 550 x 750 mm. The headings used were:

"Welcome to Mackay Amateur Radio Club", "What is Amateur Radio?", "Spanning the Years" (good for young and old), *"Raising a Tower — A photographic sequence of construction", "Community Service — WICEN, Service groups, JOTA, Handicapped, Trials", "Shortwave Listening and DX", "ALARA . . . even little ladies do it! . . . Let's QSO!", "Amateur Radio Spans the World", "WIA . . . What is the WIA", "Licensing Requirements", "Department of Communications", "ITU, IARU, Interference, Pirates", "A Progressive Hobby", "Satellites, Microcomputers, Home-brewing, VHF, ATV, RTTY, Packet Radio", "The Morse Code —How to tackle it".*

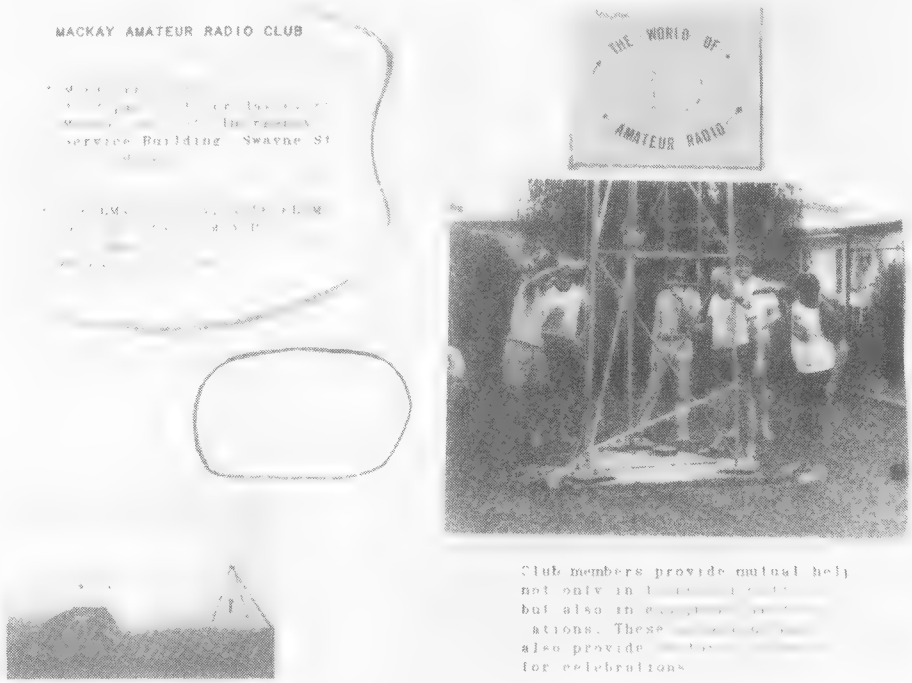
Two main tools were used for the displays to avoid the need for sign-writing by hand. A computer was used with a programme producing ten different printing styles on a graphic copier. These typed headings were then enlarged on a photocopier to a suitable size for visual impact. The latter was also handy for the many articles "borrowed" from technical sources and WIA Publications. Care was taken to acknowledge source data with occasional printed references.

Cartoons were particularly handy to lighten up what might have become an over serious display. Although the photocopier produced excellent copies of pictures, actual magazine covers, enlarged colour photos and posters were used to provide colour contrast throughout the display.

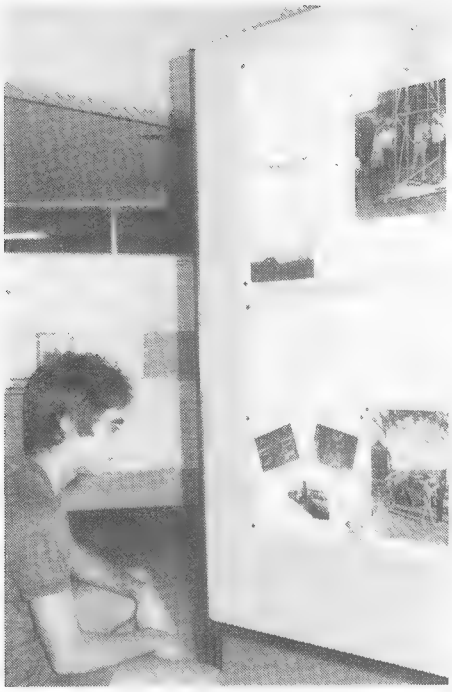
A special deal was struck at a local colour developing firm for cut prices, given a small acknowledgement near the enlargements. Six colour posters from WIA Federal sources were invaluable in giving additional impact amongst the smaller illustrations.

Probably the most important aid in presentation was the artistic hand of the writers XYL, Jenny, who added coloured borders, etc as well as organising the actual layout of each sheet.

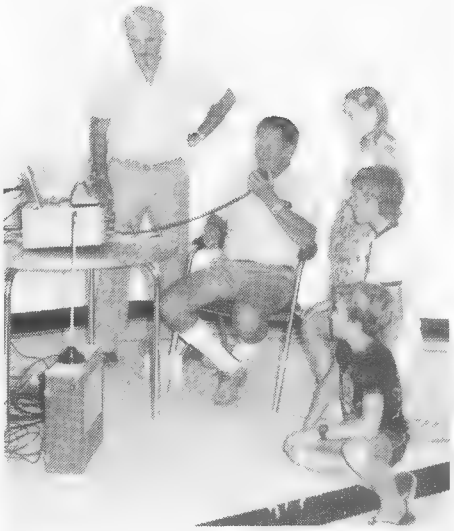
A monster world map surrounded by QSL cards was used by Bruce VK4NPF, to relate the interesting contacts made between amateurs around the world.



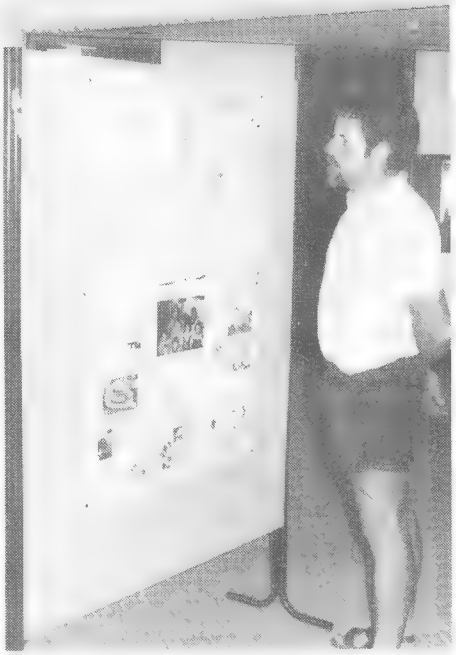
Static Display.



A Visitor views the Display Boards



John VK4VAE demonstrates the Club Station, VK4WIM/P, to the Moody family in the Auditorium of the Mackay Library. Bob VK4TKA and his Harmonics look on.



Bruce VK4NPF views the Display Board on Community Service.

EQUIPMENT EXHIBITS

Popular couple Betty VK4BET and Bernie VK4KBF, presented a range of radio equipment progressing from that fully dependent upon valves through to the latest developments incorporating computer designed circuitry. Complementary displays showed the decreasing size of circuit components to integrated circuits.

Vintage QSL cards filled out the gaps between assorted items such as carbon microphones, army communication rigs, world clocks and micro-processor controlled CW/RTTY receivers.

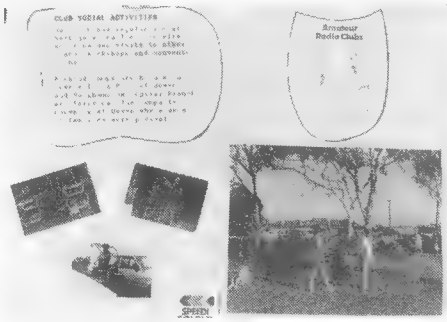
VIDEO PRESENTATIONS

Federal Video Tape Co-ordinator, John Ingham, was particularly helpful in promptly returning a copy of a number of programmes Rick VK4AIM, selected from the comprehensive range available from the WIA Library. All John required was a video cassette of compatible format with a stamped return addressed padded mailbag.

The "box"-like moving pictures of the video display put the young immediately at home and we found the audio often provided the first attraction to people from the main library rooms.

AMATEUR RADIO STATION DEMONSTRATION

At the two main peak periods, Thursday night and Saturday morning, the club station, VK4WIM/P, under the control of John VK4VAE, was operational in the auditorium. Earlier, the installation of a vertical trapped antenna on top of the library television supports was arranged to cover the bands of 80 and 20 m. A number of local amateurs were on air to ensure that definite contacts were available for any interested visitors. In fact, contacts were made from Canberra in the south to P29 in the north. Band conditions did not enable true DX but a strong friendly signal seemed to be the most important factor in introducing the hobby to the public.



Display Board showing Club Activities.

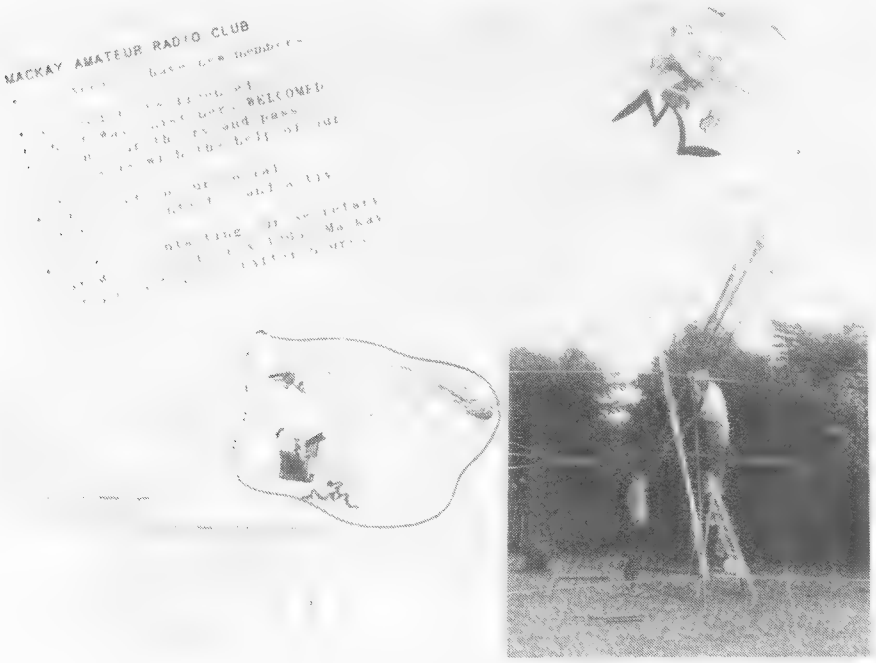
HANDOUTS

A number of handouts were available through the WIA Federal and State Divisions as well as from the Department of Communications via the friendly Radio Inspector. A number of old AR magazines and callbooks were also useful, particularly to give to well selected potential members. It was found that those people drawn towards the hobby wished to take something with them to help them keep the contact alive until their next contact, possibly the next monthly meeting.

CONCLUSIONS

It was found that plenty of material is already available in WIA Publications and other technical literature. However, it did take imagination, unusual resources and plenty of time to put this available information into a more palatable form for the public. Much of the preparation would have been similar to that used by other groups in the same position. This leads one to wonder how much time could be saved if a more professional set of basic posters were available for use by all Clubs and Divisions. These would greatly enhance the presentation of all displays.

In retrospect, the Club believes that they could have given more consideration to the timing of the display. This presentation, made during the school holidays,



Cartoon lightened up the Display Boards

Overall view of the Display. Bruce VK4NPF (in foreground) and Rick VK4AIM.

missed out reaching a greater number of younger people (possibly new members).

Never mind, we've broken the back of that one! What's next? After the Jamboree on the Air, there's the "4MK Spare Time Activities Expo" and I think that will just about fill this year's public relations requirements.

What's this about moving motions for the next WIA Conference?

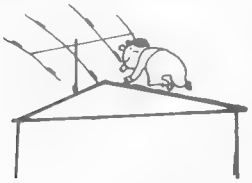
AR

FOR BEATLE FANS

From 1st December to 31st December 1984 Merseyside Special Event Group were operational using the callsigns GB 0, 1, 2, 6, 4 and GB8BCL (Beatle City Liverpool), to celebrate the opening of the Beatle City Museum in Liverpool.

For those fortunate enough to work them QSL to G4VKV, c/- Beatle City, PO Box 12, Liverpool, UK.

AR



MURPHY V MOSLEY

Allan Doble VK3AMD
206 Poath Road, Hughesdale, Vic. 3166

Adventures with a "MOSLEY JUNIOR" beam.

My Mosley Junior beam is fairly old but was always reliable with a low SWR on the 10/15/20 metre phone bands and only required the use of an ATU at the CW ends of the bands.

I suddenly found that reports I was getting were way down on those I was giving. So I checked the SWR. SHOCK! HORROR! It was over 3:1 and hard to improve even with the ATU.

SWR on 10 metres was about normal but on 15 metres three different SWR meters went to 75 percent of full scale (10:1 or more?) and could not be reduced.

First thoughts were that there might be moisture in one or more traps as it had been raining but it was too late in the day to investigate. A few warm days later nothing had changed. A borrowed linear was fed up the line to see if something would burn out but without success.

Meanwhile the LP filter, monitorscope and ATU were all disconnected so that only the built in SWR meter of the FT107M remained. No change!

Several friends consulted agreed that a fault in one of the driven traps — probably a 15 metre one — was the most likely cause of the problem.

The hard work now started as the antenna is mounted above the roof of the house and is not on a tilt-over tower.

Every visit to the antenna meant a three metre climb up the extension ladder then a six metre walk up the tiled roof and back down again.

After about twenty or thirty of these tiring journeys the beam is working properly again. *So what happened?*

All six traps were opened up and carefully examined. Traces of moisture were found in all of them. They were dried out, checked for shorted turns and for leakage from coils to elements, carefully re-assembled and sealed against moisture.

The insulation resistance of the coil formers was checked and found to be several megohms. The (commercial) balun was opened up, checked and re-sealed. The dummy load was carted up the roof to check that SWR was OK at both the end of the coax and the far side of the balun. All were found to be OK on all bands.

Apparently solid telescoped joints in the elements were found to show quite a few ohms resistance due to corrosion, so these were all cleaned and re-assembled.

The darn thing just had to work now but, you've guessed right, nothing had changed!

The next move was to do what I had been running away from. Open up the 15 metre driven element traps and unwind them.

First one — nothing found. Second one — would you believe about 10 turns in from one end, a lump of black, charred looking crud came out of the former attached to the wire leaving a hole about 5 mm in diameter. The aluminium at the bottom of the hole was very bright and had probably been subject to some electronic etching.

Both traps were rewound with new enamelled wire and heavily sealed with epoxy resin after a careful count of the turns.

This time I had the problem licked for sure!

Up the roof for the umpteenth time, traps re-assembled and sealed, down again, switch on. Result — SWR had come back to a reasonable figure but the resonant frequency on both 15 and 20 metres had gone outside of the low end of the bands.

Thinks! It must be the heavy doping with epoxy.

So, two traps unwound, rewound and ends sealed using only a small dab of epoxy to hold the ends. This is necessary because of the construction of the Mosley traps. *(see "AR" November 1982 page 25.)*

Up etc, down etc, switch on. Eureka! It works.

SWR as measured on the built-in SWR meter of the FT107M rig is now:

MHz	SWR	MHz	SWR	MHz	SWR
14.005	3:1	21.005	2.5:1	28.005	1.5 1
14.250	1:1	21.250	1.1:1	28 500	1.1 1
14.345	1.05:1	21.345	1.5:1	29 000	1.1 1

There should be a moral in this tale somewhere and I think it's this:

I should have tested for insulation breakdown with a lot more voltage than that in my ohm meter — say 250 volts in series with a resistor and a milliameter!

AR

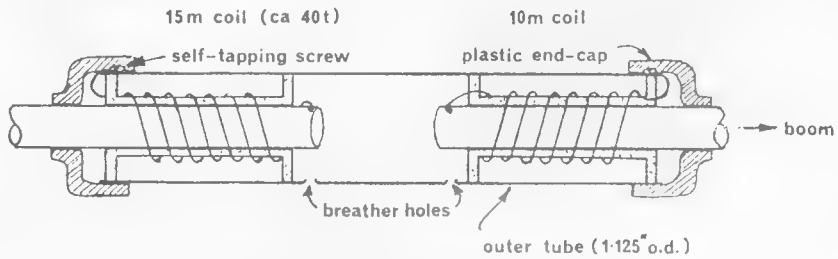


FIG. 1: Diagram of trap element

CLANDESTINE NAVIGATION AID

Reg Glanville, VK2ELG
63 Buffalo Crescent, Thurgoona. NSW. 2460.

The events in this narrative occurred in the same Prisoner-of-War work camp at the Beet Sugar factory in SE Germany where I built the short wave radio which was the subject of the March '84 article. This radio indirectly triggered the happenings of the following story, and basic electro magnetism is involved.

The complimentary responses to my article "Clandestine SWLing" in March 1984 AR, from VK1-2-3-4-5-7 per letter, telephone and during QSO's was quite unexpected, with several requests for another one in similar vein. After much thought, I decided to once more impose on my XYL's typing skills and "give it a go" — hence this submission.

For over two years the sole source of world news available to our party of approx 50 (Aust, NZ and British) was German. The radio heard while working near their lunch room, newspapers retrieved from a war effort salvage bin, plus the occasional copy of "The Camp", an English language news sheet printed in Berlin for Allied POWs. Naturally, the German media was subtly biased in their favour (as was ours) — isolated as we were in central Europe. After two years our morale and optimism was surreptitiously eroded. "Fortress Europe" appeared impregnable, and thoughts of escape from our location waned.

By mid 1943 I was receiving news from Daventry on my radio (see AR March 1984) — the German "1,000 year Reich" was crumbling after only four years! —the first ray of light since becoming a guest of the enemy two years before. Our morale was infused once again with optimism. The possibility of escape seemed viable, albeit tenuous, and thoughts trended in that direction.

An escape plan with any hope of success could not be formulated without a reasonably accurate map of Europe, indicating various military front lines and "friendly" boundaries. An attempt to draw one proved a failure. German newspaper sketch maps of various European military and political situations appeared to be the obvious.

The prison compound gates were locked most of the time, and the barrack's doors were locked and barred from 8pm to 5am — the period for clandestine activity!? After a month I was able to draw a rough map of Europe but the main problem was to strike a common distance scale.

I sat "glued" to the headphones, seeking information on geographical distances mentioned in news services, and logged quite a few over the period. Another source was discharged wounded German soldiers working at the facory — a disillusioned lot. Casual questions, such as *"Well, how far is it from Munich to Belgrade?"* were usually answered without suspicion.

The map finally showed the approximate distances from our camp as Belgium 450 miles, Switzerland 400, Italian and Russian fronts 550, Yugoslavia 400. The first three were ruled out because of a long trek through enemy Germany, the Russian front because of massive enemy forces, so we opted for Yugoslavia, despite is waring factions.

The route was through friendly Czechoslovakia, and unpredictable Hungary. This route was then redrawn with greater accuracy and the rest of the maps destroyed. We were faced with mountains, rivers and cities — a compass was essential.

By now I had selected a New Zealand partner, who had a fair knowledge of the German language and was a dependable type I was camp interpreter, and also had a brief smattering of Polish and the Czech language — we maintained secrecy over our plans. My partner's responsibility was food, clothing, first aid, — mine, time schedule, map, compass and route. Procuring a compass proved a major problem — the multinational civilians forced to work at the factory had pitifully few possessions, certainly not a compass, even the friendliest German would not risk supplying a compass to a POW — the only avenue was design and build one. The utmost secrecy must prevail, a compass could only mean ESCAPE — our guards major concern.

For the next few nights my thoughts were fully occupied by the project — *where does a prisoner, deep in enemy terrority, find the materials for a magnetic compass?* My partner suggested that we adopt 'qui vive' for any broadly suitable materials and allow this to dictate design — however, I opted for prior theoretic design, and then seek the required bits and pieces.

The format that evolved was as follows: the compass case had to be non-magnetic, compact, robust, with a removable screw lid and clear celluloid viewing insert — a short, vertical needle glued to the bottom would serve as a pivot. On this pivot the rotating platform with magnetized needle would be mounted, hopefully to indicate north!

THE CASE

Two weeks of nonchalant peering into factory garbage produced nothing within our requirements. Curious Germans were assuaged by *"Thought I saw a rat" — "Looking for a bootlace!"*

Suddenly the problem was solved — a consignment of British Red Cross parcels arrived at our work camp, and some of them included cakes of Gibbs Dentifrice, in the perfect container for our compass! Approximately 2.5 inches in diameter by .75 inches deep, screwed lid of dark brown bakelite.

These food parcels, in a standardized carton, were issued through the International Red Cross to prisoners of war of all nationalities who were undersignatories to the Geneva Convention. The route to us was Portugal, Switzerland, Berlin.

BACK TO THE COMPASS

First job was to cut a circular piece out of the lid through which to view the needle — quite a task through hard, brittle bakelite, without tools. A two inch nail was obtained from the carpenter's shop, and when the barracks were locked, action commenced.

A circle, was carefully scribed leaving about a .25 inch annulus at the rim to strengthen the thread, and as a mounting flange for the celluloid window. Following this circle round and round, the nail became blunt after about ten laps, and was re-sharpened on the concrete floor, under our bunks to minimize risk of suspicious guards sighting the marks.

Because of my association with things of an electrical nature, my nickname was "Sparks", but during this period of scratching around, the pseudonym became "Chook"!

The brittle fragility of the bakelite negated the use of any pressure on the nail — the job seemed endless, the fingers numbed. A week passed before the window appeared, albeit with a section of the annulus rim broken away.

Clandestine SWLing on my radio at night indicated our advance in Italy had slowed. Escape to me was essential.

My partner had assembled clothing — one set each of new underwear and socks, to be worn — another set, well worn, to be carried. Sound, but well worn and faded uniforms and boots, plus grubby cloth dilly bags, hopefully to be less discernable amid the motley myriads of polyglot tongues of foreign forced labourers who propped up the enemy's war economy. All tags, badges and military type buttons were removed, but our clothing could still be proven as British uniform if this were necessary, should we be apprehended and accused of nefarious spy type activities, for which there was only one penalty.

I found a scrap of clear celluloid and a small cork in the factory laboratory trash bin, glue from a friend in the carpenter's shop and a sewing needle from a Polish girl worker. The needle was broken off short, inserted through the piece of cork glued to the bottom of the case, point upper most. Hey presto, the compass case with pivot and transparent lid was complete. Now for the magnetic "works!" The frustration and time consumption to produce the needle assembly was massive.

The bearing for the magnetic needle was to be the tip of a small glass phial, which positioned over the vertical needle pivot would provide almost friction free rotation — the source once again the laboratory, where small sealed phials of chemicals were used in quality control testing.

Normally I was called to the lab at least once a week, for minor electrical problems — such as a blown globe or fuse.

For three weeks the silence from the lab was deafening not the slightest need for an electrician — but finally, a faulty desk lamp.

In departing I passed the assay bench — three opened, empty glass phials thereon — my offer to dump them was accepted — two of the tapered tips appeared suitable, but they were too long, and the open ends were jagged. The restricted height of the compass case limited the glass bearing to .25 inch. So commenced the onerous task of grinding the fragile piece down to size, another "under the bunk" operation on the concrete floor of the barracks.

Half an hour later it shattered — obviously the smoothest patch of concrete was too rough. So the sole remaining tip, tied in handkerchief, was taken to my workplace in the electricians shop, where I had access to a fine emery stone.

There followed the delicate operation of grinding, whenever the German staff were absent. Days passed before the desired length was attained, a smooth true edge to the open end. Back in the barracks, using a nail, a hole was drilled through a rectangular piece of celluloid, the glass tip was pressed in and glued, the magnetic needle platform was a reality!

The compass accuracy depended on completely unimpeded rotation of the platform on the vertical pivot needle point — thus it was essential that this platform be perfectly balanced. This could only be achieved by using two precisely positioned magnetized needles, one each side of the pivot bearing. Sounds simple — try it some time!

Sewing needles were at a premium in our barracks,

so this time a lassie labourer obliged on a barter basis — four needles for a small piece of chocolate, which was literally unavailable in Germany. Three of them were identical in size, but displayed not a vestige of magnetism — how to achieve this under the circumstances?

I realized then, that up to that point in time, magnetism had been taken for granted, and my knowledge thereof was vague. A steel needle, exposed to a magnetic field should become magnetized, so the hunt for a permanent magnet commenced. I well recall the morning when, on a slim pretext, I entered the factory machine shop and my presence there was questioned by a German worker. His startled expression, bordering on pity, was worth seeing, when I replied *"I'm looking for a magnetic field"!*

Eventually a friend working in the boiler room "procured" a small weak horseshoe magnet (another barter deal). Across the poles I laid two of the needles, one responded but showed only faint traces of magnetism, the other one remained totally oblivious to the magnet, despite my efforts over two evenings, to then discover it was plated brass! The third needle was magnetized, and the compass was ready to make its debut! The two needles were painstakingly positioned on the platform and the north polarized points slowly, sluggishly turned north — victory, almost! But stronger magnetism was essential.

The molasses content of brown sugar at our factory was removed per medium of centrifuge machines, equipped with DC electromagnet operated brakes — worth investigating? For a few days the needles were embedded in my jacket lapel — then luck. I was sent to the centrifuge room to clean the cast iron fuse boxes and surreptitiously left the needles on the magnet core laminates of a nearby machine. Never were fuse boxes subjected to such meticulous cleaning especially by an enemy alien. I made sure the job was not completed that day and returned at 6am the next morning.

The needles were conspicuous by their absence! — they had become dislodged during night shift. I spent some time nonchalently seeking around the machine, the aged, friendly German operator showing only bored indifference.

The needles had fallen down into the sugar, during braking vibration. That put me back to square one.

Another pair of needles were scrounged and my decision was to try a method I had earlier discarded because of certain inherent difficulties — to wind a coil around the needles and flash across it a 240 volt AC power source. I retrieved some 22SWG cotton covered wire and a broken light globe base from the factory salvage bin, and that night embarked on the project. Two leads about three feet long were attached to the globe base and anchored the bared ends between the teeth of a comb, about two inches apart. A fifteen turn coil was wound around both needles, leaving two feet long pig tails, with bared ends.

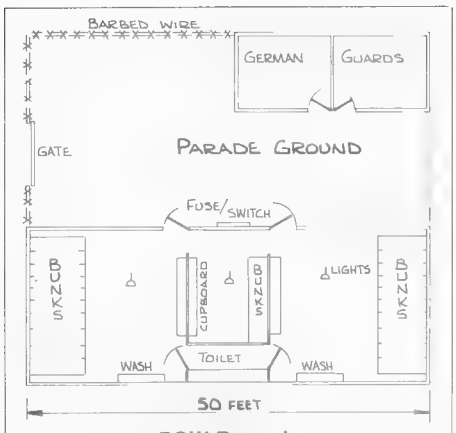
For the previous four years, my life style had been totally remote from civilized normality which had further dimmed my knowledge of electro magnetism. I remembered that a full AC cycle commenced at zero current, rose to a positive peak, fell to zero, reached a negative peak and returned to zero, fifty times per second. The magnetic flux reacted in accordance with the AC current of course.

I had to be lucky enough to strike the split second when current was just before one of the peaks — I presumed that if the dwell included current reversal after the peak, demagnetization, or polarity reversal of the needle would commence.

Our barracks fuse was outside (see sketch 1) and anticipating the possibility of blowing the sole fuse, I had deliberately shorted our lights a few days earlier. This gave me "official" access to the box to replace a fuse, which I did with one of 20 amperes rating.

NOW FOR EXERCISE MAGNETIZE!?

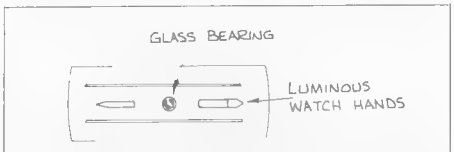
Joining one end of the needle coil to a wire protruding from the comb, unscrewing a light globe (most of Germany Edison Screw Base) and replacing it with my globe base with wires attached. These were then "live" — no switches in the barracks. Under our existence safety standards had low priority. Holding the comb rigidly on our barracks table, and tongue in cheek, the two bare wire ends were flashed across



POW Barracks

each other — the entire barracks plunged into darkness!! My contraption was unscrewed, tossed under a bunk, and the globe replaced, all by sense of touch, then I pounded on our barred door to attract guards.

I muttered something relative to 'German aluminium wiring and inferior synthetic rubber insulation' as I dashed out into the snow (only slightly colder than our barracks), replacing the fuse.



Needle Platform from the Compass

Next night I slid the two needles out of the coil and tediously positioned them on the compass rotatable platform — no luck, the platform wallowed about, showing no inclination whatsover for either N or S pole. I presumed that the split second of current flow through the coil must have coincided with either a zero or part positive, part negative phase of the cycle. It was painfully obvious that the chances of successfully magnetizing the needle points north would be very slim. However, I had learned the virtue of patience when building the radio some months before, and decided to press on.

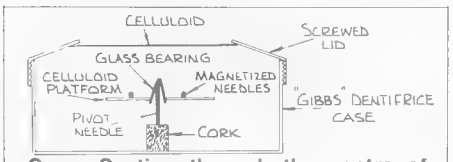
The blown fuse indicated that the time span and current were too great. The time span could be reduced by greatly increasing the speed at which I flashed the wires across each other, and the current by using a 'tail' of hair-thin wire on the end of the coil wire. This wire took some finding, but a week later a multistrand connector wire on a variable RF tuning coil from a cannibalized set in the workshop filled the need. So the endeavour resumed, night after night — no more blown fuses thank goodness. The wire dutifully melted at the tip, greatly reducing current and time. After each try, the needles had to be tested in the compass — but never a north pole!

Unfortunately, at this point, my partner was transferred to another sugar factory, ten miles distant. Totally unanticipated, this disturbed our well laid plans. Eventually contact with him was established via a French farm worker, who had some freedom of movement, especially on Sundays. No need to guard the French — the whereabouts of their relatives in France was known to the Germans!!

Finally EUREKA! — at long last the needles pointed north, the platform rotated freely and responded quickly. The last flash must have coincided with the rising positive peak of the AC cycle. Carefully I glued the needles to the celluloid platform (which is still holding forty years later!) and cut a cardboard packing piece to place under the lid to stabilise the needles to avoid bearing damage when carried in my pocket. I had hoped that the bright needles against the matt black case bottom, would be visible in near darkness, but a test made before dawn on my way to work proved this incorrect.

I still had a pocket watch which my parents had posted to me for my twenty first birthday when in Egypt (the engraved inscription had saved it from being taken from me on several occasions). It had luminous hands, the tips of which I removed and glued between the needles.

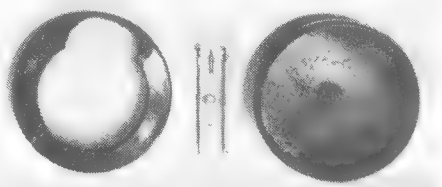
The compass was near perfect. I was ready to go — was my friend? Verbal messages were sent via French 'underground' that all was ready. A month passed, and then the reply — he would attempt to escape off night shift, reach our factory on the same night, and be smuggled into our barracks during a shift change. We thought the authorities would not search another prison compound for an escapee!



Cross Section through the centre of the Compass.

Some time later our guards informed us that a POW from that factory had been wounded and apprehended during an escape attempt — I did not see him again. Soon after this the German radio reported the allied invasion of France and all our bridgeheads held. The risks entailed in an escape attempt now seemed pointless, so the plan was abandoned.

This is a factual narrative of events that occurred around 1944 — I have striven to minimize tendencies for this to become an "escape" story. It is primarily an account of elementary use of electricity under adverse circumstances, to achieve an objective, made possible by my pre-war radio knowledge. Furthermore it is yet one more example that electricity is taken for granted, always available to serve mankind.



Clandestine Compass — 1984.

Irrespective of the 'whys and wherefores' of magnetizing an object with 50 cycle AC, eventually a device was produced that indicated magnetic north. When the decision was made to write this, my XYL retrieved the compass from family archives — its first exposure to daylight for thirty five years — still intact, and operating perfectly!

AR

RUSSIANS DEVELOP MINIATURE TV CAMERA

Soviet manufacturers have produced a television camera one-and-a-half times the size of a cigarette packet.

Tass news agency reported that the camera, called the KT86, could be used with any TV set and produced a crisp and clear image.

Only monochrome cameras were being made initially but colour models of the same size were expected soon.

Tass said the camera had scientific, economic research, and domestic applications, but the report did not say when it would be available commercially.

AR

USER REPORT — THE TET HB-433DX QUAD BAND BEAM

Brian Warman VK5BI
Box 677, Whyalla, SA, 5600

Having been a Cubical Quad user for 15 years or so I only gave this antenna away (literally!) due to moving to a city and was compelled to look for something looking a little less like a CB antenna. Favoured American antennas cost an arm and a leg so when the TET range was investigated, these antennas looked like the answer. The antennas are made in Japan and are very favourably priced in this country. An added attraction was coverage of the 7MHz band — one of my favorites of DX.

I rang the agent who unfortunately is not really amateur oriented, and could not offer me such information as — *does it come with a balun?* But they were very helpful and the box eventually arrived per passenger rail.

I picked up the box and took it home. The antenna is well packaged in a fibreboard container of about 2 metres length. When I opened the box I was greeted with a conglomeration of aluminium packed in little pieces of polyprophelene. Full marks for packaging.

I laid the bits out on the patio. The elements and traps are all labelled. Hardware is packed in plastic bags and all bolts, screws etc are stainless steel. A little booklet is included showing construction details.

One requires a large area in which to assemble the beast. The longest element is 9.25 metres, that's 30.5 feet long! Configuration of this antenna is three elements including two phased driven on all bands 40 through 10 m and a director which is functional on 20-15-10.

The boom is assembled first. This is a solid piece of thick walled aluminium and comes in two sections in 2 m lengths. I assembled the director (easy since all traps and elements are labelled), and attached it to the boom. Then measuring from this element the two driven elements may be assembled and attached as per the measurements given in the instruction package. It is as well to keep the third element loose so that the phasing line will slip into place easily. Once the phasing is attached the whole lot may be bolted together. I used petroleum jelly on all element joints, and all screws and bolts. All elements are pre-drilled and the self-tapping screws (which have generous thread depth) go in with no trouble.

The antenna assembled I put it out of the way for the moment so that I could think about getting the tower ready. I stood it against the fence standing on its director.

The antenna comes with a stainless steel mounting plate together with necessary grooved wedges which should ensure the boom stays in correct alignment. Included in the package is a well constructed coaxial balun and male connector.

One point of some concern relates to the correct point for attaching the antenna to the tower. The instructions supplied, and all of the illustrations in the advertisements for this antenna show it attached in front of the middle element. This means the mass is unbalanced. I can only assume the intention is to keep the phasing wires all clear of the mast. This is the way I attached mine anyway.

Checks of the antenna at 10 metres confirmed the advertised specifications. In fact this antenna exceeds them in most instances. Any fears I may have had of narrow bandwidth compared with my quad have been dispelled. I believe this is due to the antenna having two driven elements.

The antenna is rated to 1 kW/CW and, by the look of the wire used for the traps I have no doubt there would be no problems with cooked traps at this level.

Note: A review of the TET HB443DX Quad Beam appeared in December AR, page 30. The HB443 is a four element beam whilst the HB433 is a three element beam. **AR**

THUMBNAIL SKETCHES

Alan Shawsmith, VK4SS
35 Whynot Street, West End, Qld 4101

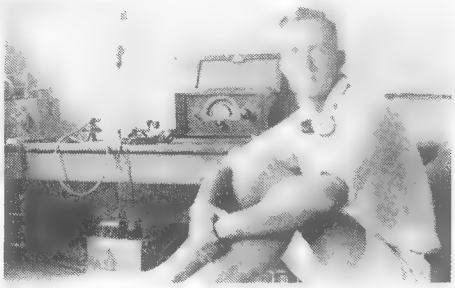
WILLIAM JIM BERRY — VK4WB

Jim VK4WB was licensed 18th May 1934 at Buranda, Brisbane. He has the honor of belonging to that select group of OOTers who've been active for over half a century and for all of this time he is conscious of the fact that he has used the callsign of one of VK4's earliest famous pioneers, viz OA4WB

OA4WB was first used in the years 1919/20 as a temporary call by William Bright, a 'gun' telegraphist with the Queensland Railways and an ex-Army Signaller WW1. (The VK prefix was to come later). At the immediate post-WW1 period of amateur radio's history, the PMG was reluctant to issue a call to a private individual — only the intervention of the then Prime Minister Billy Hughes made it possible for OA4WAB. A commemorative wall plaque inscribed with his name and call can be viewed in the vestibule of the Toowoomba City Hall.

Jim VK4WAB kicked off in 1934 with the ubiquitous Hartley 45 oscillator and an O-V-1 Reinartz receiver. The photo shows him, still in his teens, on a camping holiday at Woy Woy, NSW in 1934/5 using the call VK2BI; a 15 watt transmitter is at left and the receiver is in the centre of the photo. He clearly remembers working into VK7 with 15 watts input and loop fone.

Another of Jim's interests is that he gets his mobility from two powered wheels — not four. When I queried the safety of his means of locomotion in and around the busy parts of Brisbane at his age, his reply was, *"I'm just about to buy a new motor bike"*. Not bad for a septuagenarian, you'll agree!



QSP

TWO NEW DXCC COUNTRIES?

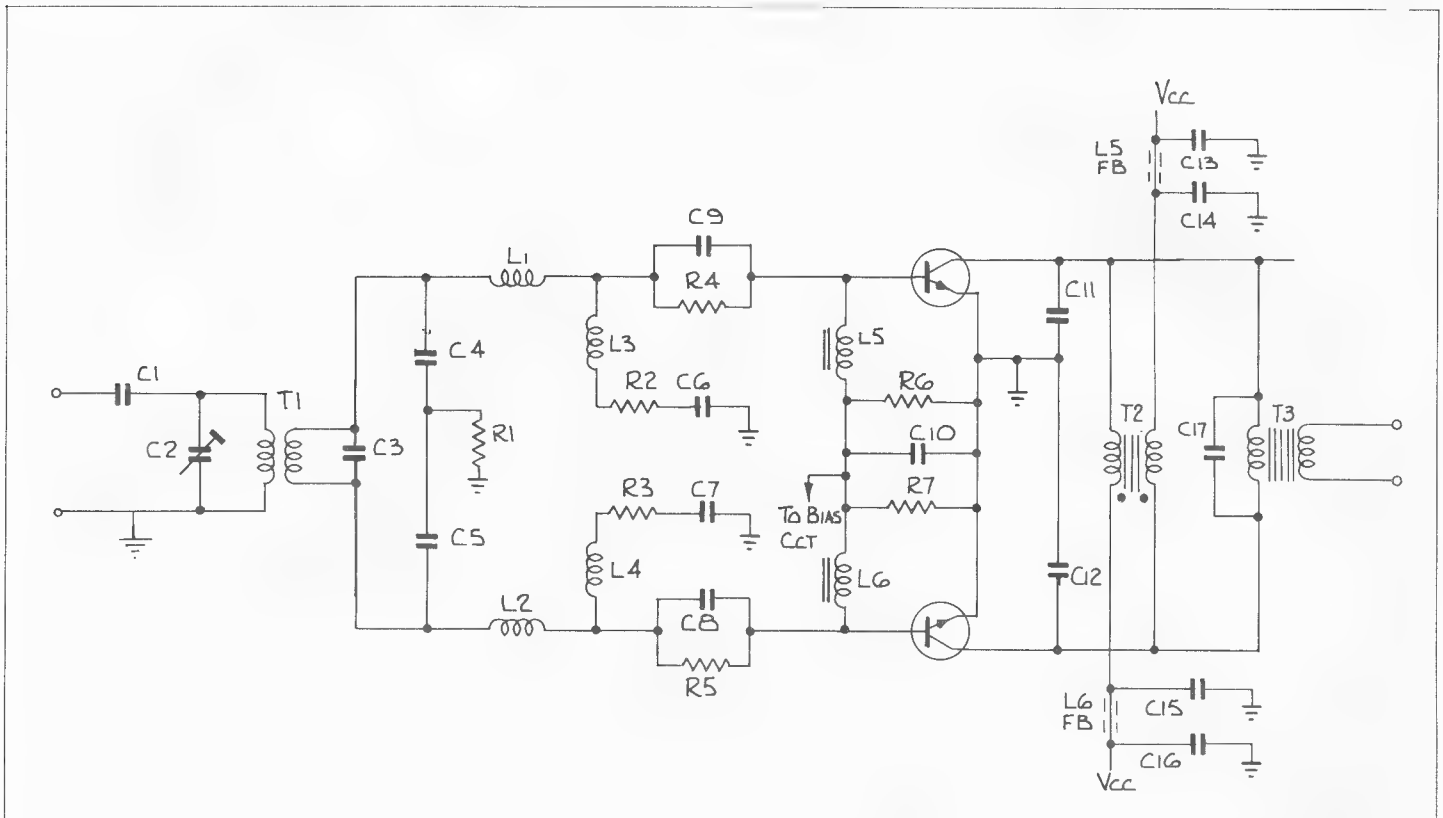
The ARRL DX Advisory Committee has voted to recommend separate DXCC country status for the British military base areas on the Mediterranean island of Cyprus. The case for country status is based on the following: when the Republic of Cyprus (formerly a British possession) was established by treaty in 1960, the United Kingdom retained sovereignty over both the Akrotiri military base and the Dhekelia military base, which continues to the present. The area of these two British bases total approximately 100 square miles on the 3572-square-mile island. Amateur Radio operations from the bases use ZC4 callsigns issued by British authorities, while all other amateur operations from Cyprus sign 5B4 calls issued by the government of Cyprus. Under the DXAC recommendation, the two bases would together count as one new DXCC country in accordance with DXCC Criterion Three — separation (from Great Britain) by foreign land. Note that the bases would be considered as one DXCC country because they are about 50 miles apart. Under Rule Three, the two bases have to be separated by at least 75 miles to be considered as two new ones. The DXAC recommendation now goes to the ARRL Awards Committee for action. Readers might remember that the last DXAC new-country recommendation — separate country status for the Baker and Howland Islands in the Pacific — was emphatically rejected by the Awards Committee. So stay tuned!

In other DXCC news, Minute 68 of the October 1984 Board Meeting instructed the DX Advisory Committee to reconsider DXCC country status for the Vienna International Center, 4U1VIC, in light of a briefing paper to be prepared by ARRL staff. A comprehensive briefing paper has now been completed and distributed to the DXAC. The Committee was asked to respond by 20 January 1985 (the deadline called for in Minute 68), so work could be completed on the issue prior to the 1985 Annual Meeting of the ARRL Board, January 24-25.

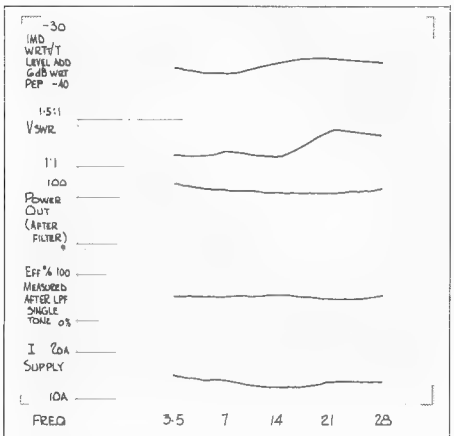
from ARRL Letter, Vol 3, No 26

WIDE BAND LINEAR AMPLIFIER . . .

additions to article in November



Schematic Diagram for the High Frequency Wide Band Linear Amplifier which was published on page 10, November Amateur Radio.



Graph 1 — refer page 12, November AR.

VHF COMMUNICATIONS MAGAZINE

1985 Subscription Rates

Airmail ..... $Aust 14.50
Surface Mail ..... $Aust 10.00

REMEMBER . . . .

If trapped by a bushfire —

Use every means to protect yourself from radiated heat and act logically, don't run or panic, remain calm.

from Smoke Signals — January 1985

AR

CHINA MODERNISING PHONE SYSTEM

Direct dialling to foreign countries from Beijing (Peking) and other major cities were part of a planned new communications network for China.

The present overtaxed and problem-prone phone system which allows no direct dialling, internally or overseas, is to be upgraded using advanced technology.

Minister of Post and Telecommunications, Yang Taifang said the number of phones would double to more than 10 million by 1990 and be more than 33 million by the end of the century.

Three million new lines, 1.2 million controlled by computer, and 60,000 long-distance cables will be laid.

AR

THIS IS GB2SDD CALLING THE WORLD

The Saint David's Day Special Event Station will again be operational on the 1st March 1985 to celebrate the National Day of Wales.

In 1984, 1300 contacts were made in 24 hours. With this record in mind the BSC Port Talbot Amateur Radio Society are preparing to celebrate SDD on the amateur bands in 1985.

The Special Event Station will be operational from midnight the 28th February to midnight Friday 1st March 1985. Activity, conditions permitting, will be on all HF and VHF amateur bands. A team of enthusiastic operators will be pleased to make contacts, and as ever they will endeavour to pass a message of friendship and goodwill to all countries of the World. All are cordially invited to join in on the proceedings.

The Special Event QSL card will be sent to all amateurs making contact with the SDD Station and we will also be pleased to respond to reports sent in by Short Wave Listeners. IRC's would be appreciated if a card is required by return post.

All amateur licenced operators interested in the attractive Saint David's Day Award should aim to meet the following requirements.

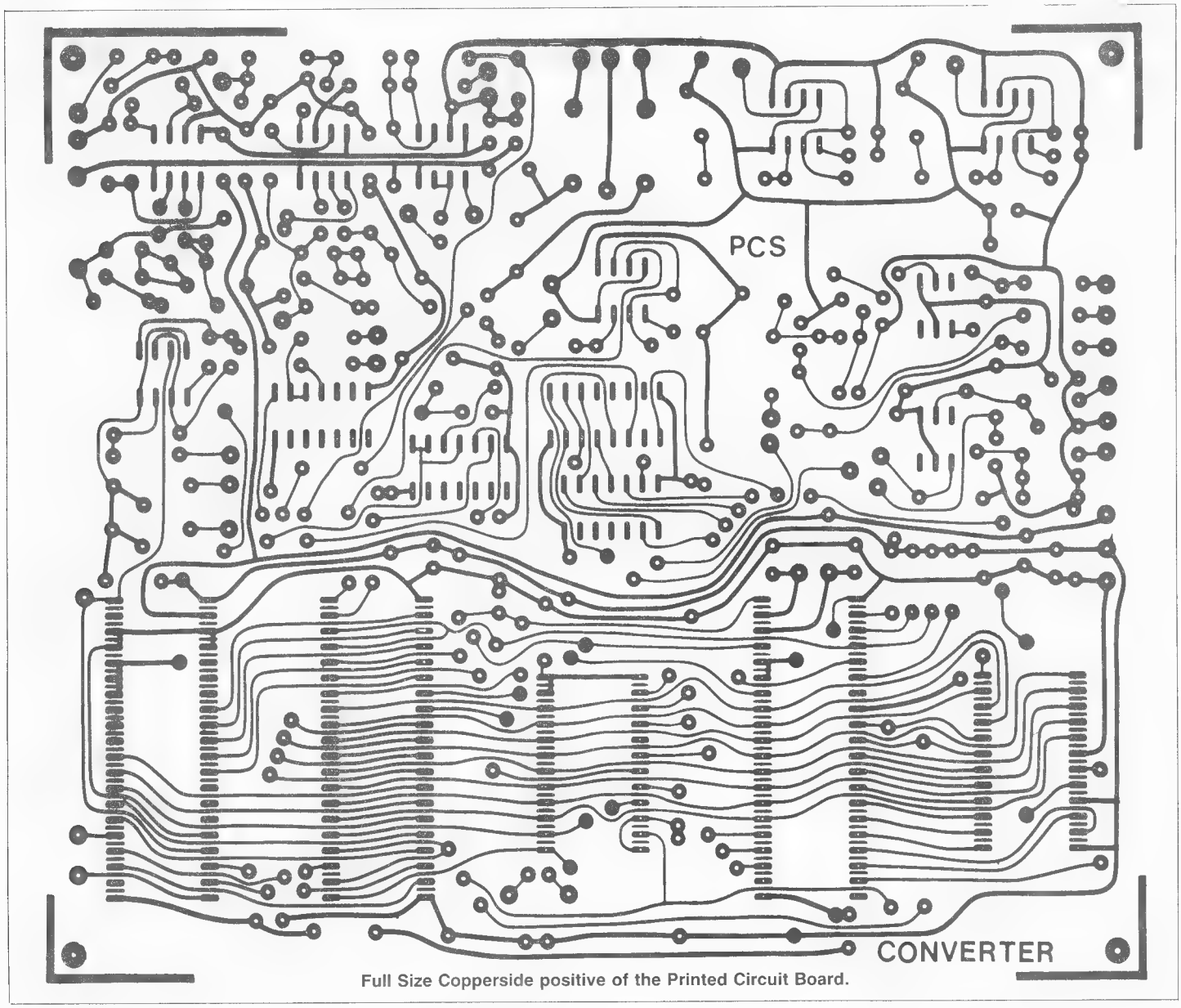
Contact should be made with the Special Event Station on Saint David's Day (1st March 1985) and any 5 other Welsh amateur stations during the months of February and March 1985.

To claim the Award please forward copies of your logged contacts along with your cheque or Postal Order to the value of 6 IRC's to cover P&P made out to SDD Station and addressed to the Event Co-ordinator. Mr R. R. Jones, GW4HOQ, 'Bryn-Ynys', Strawberry Place, Morriston, Swansea, West Glam., SA6 7AG.

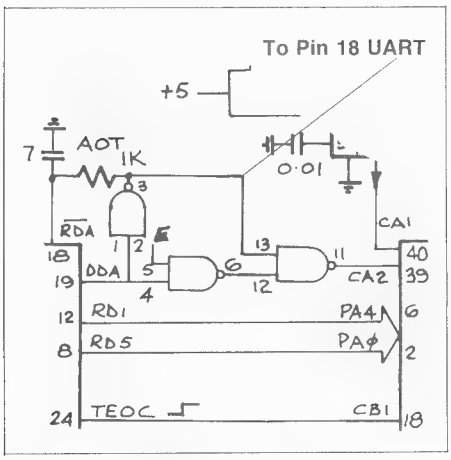
AR

MODIFICATIONS & ADDITIONS TO VK3BFG RTTY-MORSE ARTICLE

*see page 16, December AR.



Full Size Copperside positive of the Printed Circuit Board.



TRACY

The Cyclone Tracy 10th anniversary story in AR last December has created some interest and stirred up memories.

It concentrated on the recollections of Slim Jones VK6ATJ (ex VK8JT) and Ken McLachlan VK3AH and the roles they played.

An article on our hobby's involvement in the Darwin disaster recovery was well overdue.

In a disaster of that size other radio amateurs would be involved and hopefully they will put their thoughts on paper so a complete record of events can be compiled.

An error in the story has since been found. It was not Mal Westwood 9M2MW involved in the emergency communications but Mike Paget then 9M2ML (now VK3CDB) — apologies to both Mal and Mike.

Jim Linton VK3PC

AMSAT

While the traditional way of working stations through amateur satellites has been to set up and operate one's own earth station, more and more amateurs are now being introduced to satellite communications through the use of "gate way" stations. Simply put, a gateway station is an earth station that takes your signal and retransmits it to a satellite for you. The signals received from the satellite at the gateway station in turn are retransmitted by that station for you to hear.

Gateway stations often operate using local terrestrial repeaters. Thus, even those amateurs using hand-held transceivers can participate in contacts through satellites such as OSCAR 10.

From CQ — October '84

AR SHOWCASE

VICOM — ON THE LEADING EDGE OF TECHNOLOGY

Vicom Australia is ten years old and owes its huge success to amateur radio.

Incorporated in November 1974, Vicom quickly became a force in the resurgence of amateur radio during the 70's. Today, Vicom is essentially a communication and engineering company specialising in HF and other radio communications as well as sophisticated electronic test equipment.

With an annual growth rate of some 30 percent in Australia, Vicom is a major force in its field and is in direct competition with many of the world's largest multi-national electronics groups.

Australian-owned, it opened, in 1980, a New Zealand Office that is experiencing a 50 percent annual growth rate.

Whilst it has concentrated largely on Government business in Australia, New Zealand, Papua New Guinea and Singapore, Vicom has now released the GRID Compass Computer which will see the development of strong marketing initiatives within the business community.

Vicom's Chairman and Managing Director is Russell Kelly VK3NT, an accountant who has had extensive financial and computing experience with several large companies. Russell has lectured and consulted in Accounting, and Computer Science and has been actively involved in communications and electronics.

Other founding Board Members of Vicom Australia include Michael Goode VK3BDL of the stockbroking firm A C Goode and Company; Peter Williams VK3IZ who is the Company's Director of Technical Services and Neil Lambert ZL2JO, who is responsible for the New Zealand operations.

Peter was for some time WIA Federal Secretary and IARU Region 3 Secretary.

In the early days of the Company, Vicom was exclusively involved in amateur radio and used this as an entree into the professional communications and electronics industry. Russell said that the main reason for parting with amateur radio was because of the poor margins being offered and the ultimate slump in consumer demand caused by the recession. He said that this trend was evident world-wide and most of the amateur radio manufacturers had been forced to diversify into the commercial and professional communications markets.

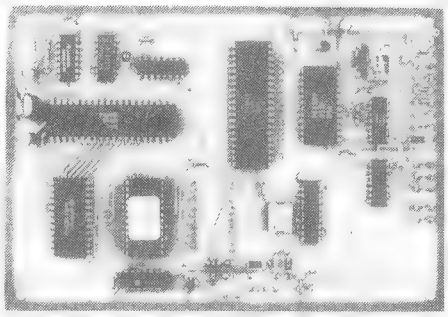
Russell believes that Vicom's success is principally due to the sourcing of only quality products which are backed-up technically by both the Principal and Vicom.

The next few years will be even more challenging as Vicom intends to set up a manufacturing base in Australia and New Zealand for the production and world-wide distribution of specialised communications equipment. In addition, Vicom is becoming increasingly involved in sophisticated Government communications and electronic warfare systems and complex HF Embassy communication systems.

INTELLIGENT DIGITAL COMMUNICATIONS INTERFACE

GFS Electronic Imports recently announced the availability of a new digital communications interface unit, the model CPU-100. It's design lends it primarily to interfacing a dumb ASCII terminal with a radio transceiver via a modem, which GFS can also supply.

Using a 6809 microprocessor the CPU-100, via ROM software, is able to perform a wide variety of functions. These include transmission of both BAUDOT and ASCII at user definable speeds, digital



selective calling, as well as a number of built-in buffers. SITOR transmission may also be possible given the appropriate software.

Because of its built-in intelligence the CPU-100 is extremely flexible. For example it may be configured for either simplex or full duplex operation depending on its end users' requirements.

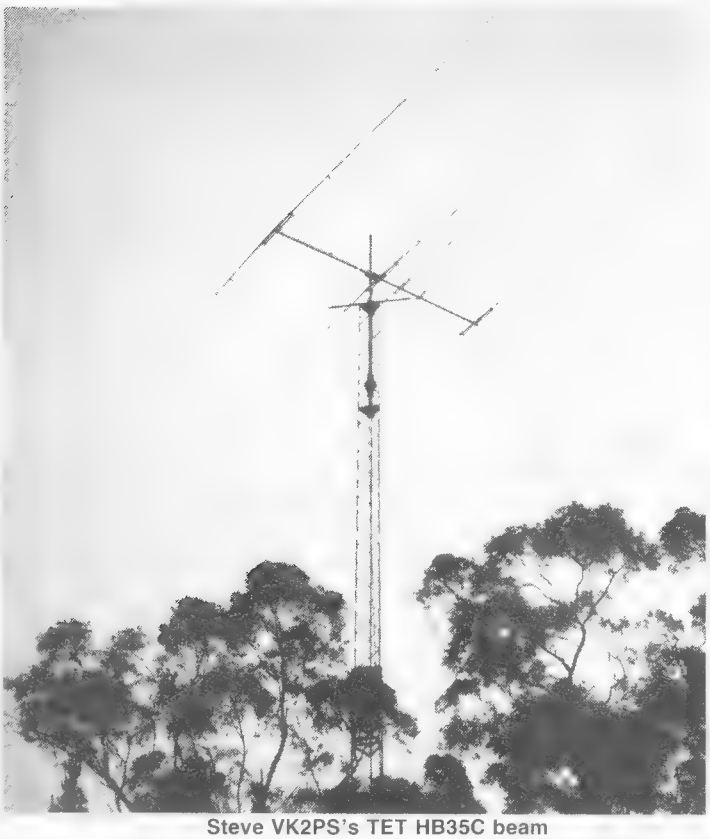
A wide variety of applications exist. These include accessing a mainframe computer from a vehicle or aircraft, radio teletype operation where a number of stations operate on the one frequency and the calling station wishes to address each one separately via selcall.

GFS are able to supply the CPU-100 on OEM basis as a pre wired and tested PCB or as a fully housed unit including their MDK-17 modem. Special applications software can also be made available.

For further details contact the manufacturers, GFS Electronic Imports, 17 McKeon Road, Mitcham, Vic 3132, PO Box 97, Mitcham, Vic. Phone (03) 873 3777.

AR

CAPTURING THE DX??

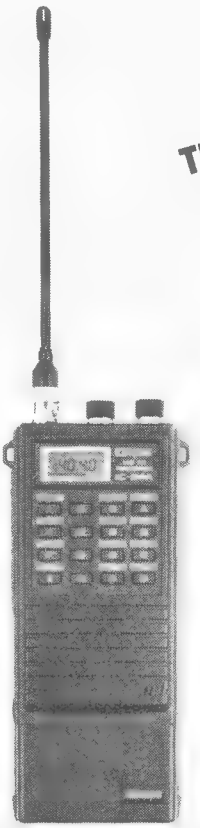


Photograph by Steve Pall VK2PS

Steve VK2PS's TET HB35C beam

ICOM

THE NEW



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PCB — THE VERY DIRTY INITIALS OF PRIORITY POLLUTANTS

Jim Linton, VK3PC
4 Ansett Crescent, Forest Hill, Vic 3131

This article, written using a number of sources, aims to inform the hobby radio community about hazardous PCBs — the most insidious chemicals ever made by man.

Polychlorinated Biphenyls (PCBs) were first discovered in the 1880s, but it wasn't until 1960 when people monitoring the effects of the insecticide DDT found they were getting other chlorides which turned out to be PCBs.

Their stability combined with di-electric and fire resistance properties led to widespread use in industry.

They have been used in electrical components such as capacitors and transformers, and a variety of other products ranging from carbonless copy paper to kiss-proof lipsticks.

REASONS FOR WORLDWIDE CONCERN

Polychlorinated Biphenyls are dangerous because they can cause medical problems and biomagnify in the ecological food chain.

In the long term heavy doses of PCBs cause liver damage, thyroid gland disorders, disease in the newborn, and are regarded by the World Health Organisation as being carcinogenic to humans.

The Victorian EPA's chemical division director, Dr Brian Robinson has warned direct skin contact with PCBs may result in chloracne, a severe skin disease which can disfigure. Another problem is swelling of eyes exposed to PCBs.

Telecom Australia workers dealing with the disposal of electrical components containing PCBs are given protective clothing including oil proof gloves.

Even with these safety precautions they have been warned to thoroughly wash their hands before smoking, eating, or using toilet facilities. PCBs can also enter the body through inhaling

To safely dispose of PCBs they have to be incinerated at 2,200 degrees celsius.

A special incinerator ship named the Vulcanus, run by a European company, visits a number of countries, including Australia, by appointment to take on board quantities of PCBs for disposal.

Meanwhile microbiologists were trying to find effective methods of disposing PCBs which could have long-term effects on the world's environment.

WHERE PCBs ARE FOUND

While importation into Australia of PCBs stopped in 1978 they can still be found in old oil cooled transformers and capacitors.

An article in Teletechnician, May 1983, said PCBs had been used in high voltage non-polarised capacitors which are liquid filled, liquid cooled power transformers, and fluorescent lighting circuits (power factor correction capacitors, liquid filled).

This publication is the official journal of the Australian Telecommunications Employees Association, whose members are employed by Telecom Australia

The Teletechnician article deals with identifying possible sources of PCBs, their safe handling and disposal

A check with some Telecom technicians recently found components containing PCBs were still in equipment

The practice in Telecom is for weeping or leaking components to be removed and replaced with those not containing PCBs

This means radio amateurs should be alert for components with PCBs in disposals equipment from all sources — particularly broadcasting or transmitting equipment which use high power capacitors.

Ham Radio said that apart from the obvious risk in headed *"When hazardous waste comes home — PCBs in the ham shack"*.

This was a follow-up to other reports in the US amateur radio press about dummy loads as a potential source of PCB contamination in the shack.

Concern was about PCB in the form of transformer oil being used as the coolant in dummy loads.

Ham Radio said that from the obvious risk in handling a leaking dummy load containing such oil, the heat in a dummy load could release invisible airborne PCBs.

While sniffing suspect dummy loads is strictly discouraged due to the hazard of inhaling — the article added the smell of PCBs was similar to that of moth balls.

It appears to be a remote possibility commercially-made dummy loads with PCBs have been imported into Australia

But someone in Australia could have homebrewed a dummy load and used second-hand transformer oil containing PCBs.

The suspect oil is a straw color, and the liquid has also been used in industry as a hydraulic fluid.

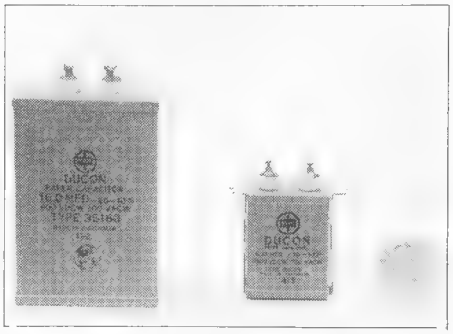
It would be wise for everyone to check around their shacks and through junk boxes for possible components containing PCBs

To dispose of or obtain further advice about PCBs — contact the environmental agency in your state or territory.

PCB COMPONENT REGISTER — ISSUE 4 SEPTEMBER 1984

(version adapted by this article's author)

Parts list of components and equipment known to contain PCB (Polychlorinated Biphenyl) from sample testing, or believed to contain PCB from the advice of manufacturers or suppliers



Two examples of capacitors known to contain PCB oil. The type 3S160 is the smallest in a series which has some physically large capacitors.

CAPACITORS

AEE (now Rifa) — FW series, FG.
DUBLIER — PO 19941/1
DUCON — S, N, and P series, Type 10N40, 11, 12P01, APT 4300N, GPM 2500 HCR, 3S 12B, 3S05, 4S50, 4S80, 10S80 12 P01.
DUCONA 2840
GENERAL ELECTRIC — 45F
PLESSEY — APF 250 series
SPRAGUE — Type 271 P277

EQUIPMENT

Various HF, MF, and TV transmitters in all states, the Northern Territory and ACT.

Power Conversion Units (rectifiers, invertors etc), probably thirty to forty different models in use supplied by a number of manufacturers. No specific check has been made on any of them to date. However if the date of manufacture was prior to 1975 then the capacitors in the units may contain PCB and should be checked against the capacitor list above.

Miscellaneous equipment: If capacitors in the following units are PLESSEY and have a metal case with the last two digits of the four digit manufacturing date code ending in numbers 60 to 75 inclusive, then the probability of them containing PCB will be very high,

Fluorescent light fittings
Air conditioning compressors
Air conditioning fan motors
Electric motors generally
Power factor corrected electrical circuits
Discharge lighting units
Evaporative cooler units
Rural pumps
Dishwashers
Washing machines

ACKNOWLEDGEMENTS: *Environment Protection Authority, Victoria, Record La Trobe University, Melbourne, Teletechnician, Victorian Forensic Science Laboratory, Ham Radio Magazine, Telecom Australia*

AR

ILLEGAL RADIO USERS ENDANGER LIFE

The Department of Communications is to seek out unauthorised users of marine radio channels on and around Port Philip Bay who may be putting human lives in danger.

A spokesman for the Department said: *"We'll be inviting unlicensed operators of radio equipment to take out licences.*

"If we can't get co-operation then I'm afraid we'll have to begin prosecutions. Confiscation of equipment could result."

The spokesman said unlicensed operators in boats were jeopardising the safety of themselves and others. They were putting human life and the safety of small craft at serious risk, because they often transmitted messages on the marine 27.88 MHz (Channel 88) frequency, commonly used for distress calls at sea.

The Department allocates radio channels according to user categories. These provided a legal means of communication between licensed shore stations and boats and between boats.

Further information may be obtained from Ian McDonald on (03) 266 8921 re radios in boats.

AR

VHF UHF - an expanding world

Eric Jamieson, VK5LP
1 Quinns Road, Forreston, SA 5233

All times are Universal Co-ordinated Time and indicated as UTC.

AMATEUR BANDS BEACONS

Freq	Call sign	Location
50 005	H44HIR	Honiara
50 008	JA2IGY	Mie
50.020	GB3SIX	Anglesey
50.045	OX3VHF	Greenland (1)
50.010	GB3NHQ	England (2)
50.075	VS6SIX	Hong Kong
50 109	JD1YAA	Japan
50 945	ZS1SIX	South Africa
51 020	ZL1UHF	Mt Climie
52 020	FK8??	Noumea
52.033	P29SIX	New Guinea
52 100	ZK2SIX	Nieue
52.150	VK0CK	Macquarie Island
52 200	VK8VF	Darwin
52 250	ZL2VHM	Manawatu
52.300	VK6RPH	Perth
52 310	ZL3MHF	Hornby
52 320	VK6RTT	Carnarvon
52 325	VK2RHV	Newcastle
52.350	VK6RTU	Kalgoorlie
52.370	VK7RST	Hobart
52.420	VK2RSY	Sydney
52.425	VK2RGB	Gunnedah
52.440	VK4RTL	Townsville
52.450	VK5VF	Mt Lofty
52.465	VK6RTW	Albany
52.470	VK7RNT	Launceston
52.490	ZL3SIX	Blenheim
52.510	ZL2MHF	Upper Hutt
144 019	VK6RBS	Busselton
144 410	VK1RCC	Canberra (3)
144.420	VK2RSY	Sydney
144.465	VK6RTW	Albany
144 480	VK8VF	Darwin
144.550	VK5RSE	Mt Gambier
144.600	VK6RTT	Carnarvon
144.800	VK8VF	Mt Lofty
145 000	VK6RPH	Perth
147.400	VK2RCW	Sydney
432.057	VK6RBS	Busselton
432 159	VK6RPR	Nedlands
432.410	VK6RTT	Carnarvon
432.420	VK2RSY	Sydney
432 425	VK3RMB	Ballarat
432.440	VK4RBB	Brisbane
1296.171	VK6RBS	Busselton

(1) Norman Fitch G3FPK advises of this beacon in Greenland.

(2) Norman also reports this new UK beacon which started continuous operation on 30th August 1984, running 15 watts to crossed dipoles. It sends its call sign and its "Maidenhead Locator" code — IO91VQ.

(3) Federal Councillor for the ACT Fred Robertson-Mudie VK1MM advises VK1RCC is back on the air on its correct bandplan frequency. Antenna is a stainless steel halo giving omni-directional horizontal polarisation. Fred also advises a 6 metre beacon is being installed on the same site, Mt Majure, and should be operational before long.

While on the subject of beacons it is interesting to note that Bill Tynan W3XQ in QST's "The World above 50 MHz" takes his VHF/UHF fraternity to task for generally failing to provide any worthwhile number of beacons throughout the US. On 3rd January 1983 unattended automatic beacon operation was permitted by the FCC but it seems little interest has been generated. Perhaps they are not as necessary in the US with its large population and densely distributed amateurs — probably there are signals on the bands at all hours anyway — whereas here in VK, with a small population, continuously operating beacons have long ago proved their worth for alerting to band openings. It would be a very dead world without the beacons! *ROCKHAMPTON BEACON:* Harry VK4LE advises there is a beacon on Mt Archer near Rockhampton, on 432.540 MHz and running 200 milliwatts, which he can copy quite often from his QTH at Springsure. He didn't mention the callsign!

NEWS FROM QUEENSLAND

Harry VK4LE in his letter dated 11/12 said 6 metres had been very quiet, but he has been keeping 2 metres SSB alive, by contacting VK4ZWH in Bundaberg almost every morning, also VK4AEW in Rockhampton, with VK4ZEI and VK4ZHL joining in sometimes. Another regular is VK4KAL at Rubyvale. He says the east-west all land path is more difficult than the north-south coastal path.

Not too many stations on 70 cm but Harry has worked VK4ZHL and VK4ZEI at Rockhampton and a crossband QSO with VK4AEW. Also worked VK4ALW at Mackay, which being further than Rockhampton signals are usually weaker. VK4LE runs 60 watts on 70 cm to four 11 element yagis at 40 feet. Thanks Harry.

GREETINGS FROM MAWSON

Mark VK0AQ (ex VK5AVQ) has written a letter dated 26/11 after arriving at the Mawson Base on Antarctica, and said the journey of ten days down (from South Africa) was fairly smooth. The base is quite large taking half an hour to slowly walk around. It is located on a rocky outcrop and the snow/ice disappears off the base in summer. Up to writing weather had been nice with a maximum of 1°C, with no wind and sunny. He said those who had passed through the 1984 winter were wearing little more than T shirts!

Mark was rather pleased to have already had a 20 metre contact with me (VK5LP), and also a rare Macquarie Island contact per VK0CK. The other amateurs at the base thought the Collins linear was "crook" — Mark says it wasn't — when all else fails, read the instructions. The KWM2 only puts out 80 watts (sleepy valves?) which is probably just as well as the V beam antenna has a VSWR of 3 to 1. One leg of the V beam goes over the science building, picking up computer EMI. When his own gear arrives he will be seriously thinking of putting it in the main transmitting room where he can plug into the rhombics, which have leg lengths of about 100 metres.

On the question of the former IPS beacon, VK0MA, Mark says the equipment line-up consists of 6AK5, 5763, 4-65 with 120 watts output, originally on 53.1 MHz but Mark would like to shift it to about 52.4 MHz, or at least to a frequency which causes no problems with the riometer. Due to a road being built the beacon tower must be moved, which will be a good thing as it is far too close to the riometer. The obvious place for the antenna is behind a hill from the riometer, and this can be arranged if the beacon is shifted to an old transmitting building. Reducing power to 10 watts should help the interference problem, but all this takes time, and maybe pointless if QRM in the riometer continues. One can but try Mark says!

Dry air static is a problem, but advantageous in that wet clothes dry quickly and biscuits don't soften. A PS at the end of the letter says after the generally fine weather, today the wind is varying from 30 to 50 knots with fine wet snow, visibility 100 to 150 feet — a mini blizzard! He says *"You thought rain static was bad, you should hear blizzard static! Perhaps we will be having a white Christmas after all!!"*

As other news from Mark comes to hand it will be passed on to readers. As QSL manager for both VK0CK and VK0AQ I am fortunate that it is mostly possible to maintain a weekly sked with both of them on 20 metres, despite the great distances between them. By the way, Mawson time is UTC plus 6 hours — the longitude indicates it should be 4 to 5 hours. *Oh, well, who am I to question such variations!*

QSL arrangements for both stations are the same: a stamped self addressed envelope is all that is required together with your QSL card of course. No other money should be sent, we aren't in the profit making business. Any QSLs requested without the envelope may eventually be sent through the Bureau, but as I don't get to the Bureau very often it may be a long process!

NEW SOUTH WALES

Nev VK2QF has sent in an amended list of six metre countries confirmed and added a few other comments which may be of interest.

The three weeks up to about 10/12 saw VK2QF working all VK States 1,2,3,4,5,7,8,9,0 but no VK6, also ZL1,2,3,4, FK1, FK8, ZL7OY, VK9ZA. Not a bad effort one would suggest.

Nev says *"I have set up a small monitoring station using an IC505 at my house to tune about on 6 metres using a 3 element beam at 24 feet, and a gear drive rotator which is cranked around from inside my office. Very handy.*

"Superb to hear the Macquarie Island 52.150 beacon on Saturday morning (8/12) when it was in for about 2 hours at 539. At 0830 the beacon was 599 and had been for some time. David turned it off at 0845 and I worked him at 0859. He was still 5x1 on the monitor in the office at 1230. Seems most of the QSOs with various stations were 5x9.

"Missed the Friday opening (7/12) but heard from VK2BA that it was not too good in Sydney but much better to VK1 and 3 etc. Incidentally, the beacon was 599 in Sydney during the morning of Saturday but took over one hour to be audible here 300 km NW of Sydney. One wonders what size the cloud of Es was on the Saturday which produced ZL7, ZL1 and 4 and VK0 all in one large opening from here.

"My praise and gratitude to those behind the activities from Macquarie Island, to David VK0CK for staying on the air for so many hours to give as many as possible a contact, and to you for the QSL job." Thanks Nev.

EME ACTIVITIES

Doug VK3UM continues with his experiments on 432 MHz and advises 17/11 was his first chance to try the newly completed EME set up antenna system. Sent a couple of Vs at 0600 and back came the echoes, from 4 to 8 dB above the noise for 90 per cent of the time.

Doug took a break at 0800 to speak to John VK5DJ on 2 metres then worked the VK1 gang, about 6 of them, on 432.1. During this time Gordon VK2ZAB called and they had a Q5 S1 to 3 QSO for about 2½ minutes via aircraft enhancement on 432.1, so they are now able to claim the first Sydney to Melbourne 432 contact, the previous one being a bit doubtful. Gordon was running 10 watts only!

Back on the moon at 1000, called CQ and back came ZL3AAD and gave him 529. Then DF3RU called for an exchange of "O" reports.

Next morning, Sunday, 18/11, called CQ a few times, echoes OK but no answers. Doug wondered where the Ws were. Chris VK5MC informed him later that the Ws and JAs wanted to know who this VK3UM was with the big mouth and wax in his ears. Turns out he had not allowed enough for doppler shift!! Next time.

Since all this has taken place Doug has replaced the feeder with ⅞" new heliax which should give nearly 2 dB improvement. Moreover, he found a type N socket at the RF output had melted and fused the contacts! Looking at the cause it seems the unbranded type of connector had too high a contact resistance. Replaced with genuine Acme type C.

Doug says he is very satisfied with the ATN type antennas he is using and is looking forward to plenty of contacts via the moon as time permits.

Another area of EME activity is VK2AMW under the leadership of Lyle VK2ALU. Appeals were made for a new 3CX100A tube, and typical of the tremendous spirit which exists world wide in the EME group, an

airmail parcel of tubes arrived from OE9XXI in Austria, who had heard of the problem from HB9BM in Switzerland. This was followed by good tubes sent by VK5ZO and VK5MC. A letter has now been received from Peter ZS6JT (ex Z25JJ) in South Africa indicating he also is sending tubes. Lyle certainly thanks everyone for their helpfulness. After the defective tube was replaced the transmitter output was measured at 140 watts.

Also from "The Propagator" comes news that hurricane force winds totally destroyed the antenna for EME contacts at HB9BM in Switzerland on 17/11, and there are reports of other European EME stations suffering damage as well.

SIX METRES

As expected, the six metre band has been pretty good to most of us again this year. The Es contacts have been widespread and most signals very strong. Those with good antenna systems have been treated to some extra contacts not normally available to others, as the antenna works both for transmitting and receiving!

The following listings shows a fair cross section of the stations who have been operating six metres during the latter part of 1984. The call signs indicate the spread of the contacts, and there are quite a few stations who like to see their call sign mentioned occasionally, and I see nothing wrong in that!

13/11: from 0808: VK2AKU, VK2XJ, VK2HT, VK2YKG, VK2ZTW, VK2ZWE, VK2CN, VK2QF, VK2ZRV, VK2XDW, VK2XDH. 1045: VK4LE, VK4FNQ.

14/11: 0240 VK6RO. 2323: VK4JXZ. 15/11: 0001 VK9ZA, FK8EM, VK4FNQ, VK8KK, VK2AKU, VK4GI, VK4ALM, VK8GF, VK2ELS, VK2XRC, VK2ZZV, VK3XEP/2, VK2ZKO, VK1KRS, VK2XJ, VK2ZTL, VK2BHO, VK7ZIF. 16/11: 2335: VK9ZA. 17/11: 0009 to 1256: VK6ZPG, VK6HK, VK6RO, VK6XV, VK6AWJ, VK6IV, VK6BA, VK6VP, VK6WD, VK6AB, VK6ZWH. 19/11: 0830 VK2BNN, VK2BHO, VK3XEP/2, VK2YHN, VK2ZPW, VK2YOS, VK2EAI, VK2XJ, VK2YKG, VK2ZRU. 20/11: 2255 VK4JAH.

21/11: 0025 VK4ALM, VK8GF, VK6RO, VK2XJ, VK6ZPG, VK2ZZV, 0740: VK4FXX, VK4JXZ. VK2DDG, VK3XEP/2, VK2XJ, VK2BRQ, VK2AAB, VK2YDM, VK2KIC, VK7ZIF, VK1ZQS (1140) and at 2305 VK6FQ, VK2BNN, VK2ADV, VK4ZAZ, VK6HK, VK6ZDY, VK2YVG. 22/11: 0002 VK2ZZV, VK2XJ, VK2DLW, VK4ABV, VK3ZKP & VK3ZGW (Both backscatter), VK6VP, VK6RO, VK2QF, VK2AKU, VK3XEX, VK4ALM, FK8EB, VK3XR, VK4KHZ, FK8EM, VK4ALM, VK2KIC, VK4ABP, VK4JH, VK4NL, VK4JAH, VK4AMH, VK8TM, VK2YHN. 23/11: 0205 VK6RO, VK6ZRY, VK2EEC, VK2BHO, VK2AKU, VK8TM.

24/11: 0109 VK4ALM, VK6YA, VK6KHD, VK8TM, VK7ZIF, VK7ZAP, VK7ZOT, VK7AN, ZL2CD. 25/11: 0050 VK4ALM, VK4JH, VK4FXX, VK4KAA, VK8TM, VK8ZLU. 26/11: 1050 VK7KXA, VK7RR, VK4TUA. 27/11: 0005 VK4FNQ, VK6RO, VK4LE.

1/12: 2153 VK4RO. 2/12: 0015 VK4ALM. 8/12: 0018 VK2HT, VK2ZZV, VK4FNQ, VK4ALM, ZL4AS, ZL2UFN, ZL4CN, ZL2TFY, ZL4LV, ZL2QS, ZL3TIC, ZL3ADT, VI3WI, VK7ZIF, VK7KJ, VK7RR, ZL3TIC, ZL3ADP, VK0CK, VK1GL. 9/12: 0430 VK7ZAR, VK6ZPG. 10/12: 2322 ZL2TJX. 11/12: 0020 VK1EP, VK2ZRE, VK1ZQR, ZL3AQ, VK3VD, VK2AWQ, VK3DQJ, VK3ZKP, VK3KMA, ZL2TUV, ZL2AQR. 12/12: 0123 VK8ZCV, VK7ZIF, VK7ZJJ, VK7ZAJ, VK7AL, VK6RO, VK6ZPG, VK6WG. 14/12: 0105 VK4ALM, 0535 VK4FNQ. 15/12: 0050 VK4YJF, VK2DLR, VK2AKU, VK6ZPG, VK4BTN, VK4AMF, VK8TM. 16/12: 0235 FK8EB, VK4KAA, VK8ZCU, FK8EB, FK1TK and 0700 VK8ZLX. 18/12: 0127 VK6BA, VK6VP, VK4ALM, VK2XJ, VK2DDC, VK8GB, VK8TM.

19/12: 0435 VK6RO, VK2DE. 20/12: 0215 VK6PR, 0605 VK6RO, VK6ZRY. 21/12: 0950 ZL3OF, VK7ZAR and at 2156 VK4ZJB. 22/12: 0345 VK6HK, VK3VF, VK3ZBJ, VK6RO, VK6ZPG. 24/12: 0110 VK2HT, VK2QF, VK6ZPG, VK6WG. 26/12: 0155 ZL2CD, ZL2TPY. 28/12: 0015 VK2XJ, VK2DDG, 0346 ZL2CD, ZL2TPY.

It is interesting to note that this year anyway there seems to have been a tapering off of Es in the latter part of December, especially around Christmas which is often a very good period for contacts, around 26/12 and 28/12. The more intense Es period seems to have been in the early part of December, with special mention having to be made of 8/12, the day VK0CK ran up more than 120 contacts covering VK1, 2, 3, 4, 5, 7, 8 and ZL. The fact that David was available for so many hours at 5x9 indicated a very intense Es cloud and I am very glad he took my advice to get on early in the month as there were more possibilities for him to be heard than if he left it until the last week as before.

Also of interest has been the contacts to VK9ZA, FK1TK, FK8EM, FK8EB and ZL7OY. These serve to keep an interest in the Pacific areas. P29 has been a rare commodity in VK5 this year although there are reports of other States working into there.

I note from the log of Brian VK2AKU that in addition to many ZLs he has also worked VK9ZA and JA2DDN (16/11), VK9ZA again on 17/11, also FK1SB. On 4/12 FK8EB, and on 7 & 8/12 VK0CK. Ross VK2ZRU said it took him over two hours to finally work VK0CK through the dogpile! David VK2BA had a number of exotic contacts leading up to mid November, with A35RS, ZK2SIX, JH4, YJ8RG, many FKs, ZLs 1 to 4, VK9ZA as well as all VK States except VK0 at time of writing (21/11).

A letter from Gordon VK4GM with a QSL for VK0CK also mentioned his XYL is VK4PZ. We welcome Mary to the VHF bands and note she has been working quite a bit of DX. eg 21/11 1000 to 1029 she worked six ZL1 stations; 6/12 0853 ZL2TJX, 0909 YJ8RG, 0912 ZL3TIC, 1120 FK8EM and 1202 VK0CK. I would imagine those contacts would make her very happy!

Other brief letters to arrive have been from Ross VK2ZRU who mentioned the opening on 144 and 432 MHz to ZL on 27/11. On 144 he worked ZL2TAL and ZL2TPY and on 432 ZL2TAL from 0930 to 1116 when signals faded out.

John VK4ZJB registers his thanks to David VK0CK for his marathon effort on 8/12 in providing contacts for so many stations. He also confirms Chris ZL7OY is still active on Chatham Island.

OTHER BITS OF NEWS

That 50 MHz long range DX has fallen away in the northern hemisphere is indicated in "CQ Ham Radio" from Japan via Graham VK6RO. Stations being worked include HL1, HL2, HL5, HL0, BT5RA, VS6, H44, and that's it! Good to see BT5RA on 50.110 on SSB. Last month mention was made of this station on 2 metres.

A report to hand that during late November Jeff VK8GF heard some Sydney stations on 2 metres FM. About the same time Don VK5ZRG in Whyalla heard two FM stations from VK6 via the Ch 4 repeater. Also heard of VK2AKU working VK3XEX on 2 metres SSB recently.

Bob VK5ZRO reports that on 29/12 VK5KBU worked VK5ZRG (Adelaide to Whyalla) and received a report of S9 + 60 dB! That may not be unusual you say, but it was on 1296 MHz and VK5KBU was running 1 watt to a bay of four 27 element yagis. Distance nearly 200 km. Sid VK5ME has finally worked VK5ZRG on that band, his QTH does not favour the Whyalla path.

On 25/11 at 0140 through to 0340 heard a number of JAs around 50.225 MHz at S5/6. Don't usually hear JAs this high.

18/12: VK8GB reported working 17 ZLs. Quite a good haul for that distance. Also, talking with Bill ZL2CD, he mentioned more ZLs had been able to work VK6 this year than usual, and VK8 was becoming more common!

NEWS FROM THE UK

Norman Fitch G3FPK advises of happenings in Region 1. He says that finally the Department of Trade and Industry have issued the long awaited extra 60 permits to Class A licencees to operate on 50 MHz bringing the total to 100. At present operators are limited to working outside TV hours, but there may be some improvement in this after the Band 1 transmitters close down on 6/1/85, although there are still some problems to sort out with European countries still using Band 1.

The Norwegian licensing authorities have granted permission for 25 LAs to operate on 6 metres outside of TV hours, which means they and the UK can experiment via auroras, MS and other modes.

Norman also mentions the two beacons already listed earlier, and says that during an aurora on 15/11 the OX3VHF beacon in Greenland was copied S9 + by GM3DOD between 1927 and 1935 UTC. Some amateur QSOs took place later that night after TV hours with GM and GI stations from 2310 to 2350.

The good news of course is that there is being a slow recognition on a world wide basis of the need for the amateurs to have some portion of the 50 MHz band and this first move in the Region 1 area could help other countries decide.

50-54 MHz DX STANDINGS

DXCC countries based on information received up to 15th December 1984. Crossband totals are those not duplicated by 6 metre two-way contacts. Credit has not been given for contacts made with stations when 50 MHz operation was not authorised.

Column 1: 6 metre two-way confirmed
2: 6 metre two-way worked
3: Crossband (6 to 10) confirmed
4: Crossband (6 to 10) worked
5: Countries heard on 50 MHz
6: Countries heard on 52 MHz

Call sign	1	2	3	4	5	6
VK2BA	28	28				
VK2DDG	25	26		2	12	3
VK30T	25	25			10	
VK4ZJB	23	24				4
VK2QF	23	23				
VK2VC	22	22				
VK3XQ	18	20			1	1
VK5LP	18	18			6	3
VK3AMK	17	17				
VK4TL	17	17				
VK7JG	15	17			2	
VK4ALM	15	16				
VK4ZSH	15	16				
VK3NM	15	15				
VK3AUI	14	15				
VK60X	10	10	1	1		
VK6RO	9	9	3	3	2	

The minimum number of countries confirmed for an operator to commence being listed is five, including VK.

The next list should appear in August 1985 and entries will need to be on my desk no later than 15th June 1985. Claimants are reminded full details of all contracts are required, the details having been published several times before.

LATE NEWS

As these notes were being completed I received a phone call from Bob VK5ZRO that 2 metres was starting to open to VK4. Switching off the typewriter I rushed to the shack and heard Mick VK5ZDR in contact with VK4ACE. Bob VK5ZRO had already worked VK4ZAZ and VK4KHZ. I was lucky to work Bill VK4LC at 5x9 at 0737. The band then closed! As I have said on many occasions before, you have to be quick to work stations on 2 metres over those distances especially using Es. Apparently the band had been trying to open for some time but those who had been around the longest were finally rewarded.

Special thanks again this month to Bob VK5ZRO for filling in the gaps in my operating information, and especially for alerting me of the two metre opening. Good to have friends like that!

Six metres is still active. On the morning of 30/12 (29/12 UTC) at 2258 VK2ZRE, 2304 ZL3NE, 2332 ZL4AI and 0150 on 30/12 ZL3ADT. Later in the day at 0508 VK8KK.

A note from John VK4ZJB which was too late for inclusion in the last notes mentions that Pierre FK8EM had advised there is a beacon from FK8 operating on 52.020 with a nominal power of 5 watts, antenna Swiss Q approximately 12dB gain, direction WSW from FK8 especially set up for contacts with VK stations. Operating times will be 2100 to 1100 UTC.

Although I do not have a call sign at present for this beacon I have tentatively listed it at the start of the column.

Closing with the thought for the month: "Why is it that political leaders don't seem to have all the answers until they write their memoirs?" 73. The Voice in the Hills. **AR**

RED CROSS MURRAY RIV

Gil Sones VK3AUI, 30 Moo

The 1984 Canoe Marathon communic
WICEN operators. Members of the tean
and New South Wales. There were a lot
the newcomers.

The annual canoe marathon starts a
and finishes at Swan Hill on the 31st De
follows the prize giving and the announ

Everyone has a most enjoyable ti
necessary function. The safety net p
contribution to the safe running of the

All checkpoints are provided with ra
safety boats and some key person
communications.

Both HF and VHF are used, the princi
MHz and 146.5 MHz FM.

1

2

3

4

5

6

7

8

IVER CANOE MARATHON

Moore Street, Box Hill South, Vic, 3128

unications were provided by a team of 30 team came from Victoria, South Australia a lot of old faces but most important were

rts at Yarrawonga on the 27th December t December. A New Year Eve Celebration nouncement of the results.

le time as well as performing a most et provided by WICEN makes a large the Canoe Marathon.

n radio communications and many of the rsonnel are also provided with radio

rincipal operating frequencies being 3.600

10

Photographs by Gil Sones VK3AUI.

11

12

9

1. Paul VK3DIP. 2. Les VK3BW. 3. Gilflite Sweep Boat at Moira Lakes — Checkpoint A. 4. David VK3YWZ and Bruce VK3BJZ. 5. Aerials at the start of the race, Yarrawonga. 6. Alex VK3CCT and Robert VK3AVJ. 7. Bruce VK3BJZ. 8. Skipper of the Gilflite Sweep Boat, Ken Williams, talks to officials. It was from this boat that Gil viewed the race. 9. Ron VK2EFJ. 10. A welcome break with campers between Barmah and Echuca. 11. Wally's checkpoint where HF gets into the PA system. 12. Bruce VK3BJZ and Steven VK3BHC.

HOW'S DX

Ken McLachlan, VK3AH
Box 39, Mooroolbark, Vic 3138

QSLing to Short Wave Listeners is an important part of our hobby. It is courteous for an operator to QSL accurately and promptly on receipt of a valid SWL card that has been logged as a legitimate report.

What is a legitimate report that one could expect to receive from an SWL? I, speaking as an amateur and a QSL Manager expect an accurate date and time group to be given to the station the card is being requested from, the station that the operator was in contact with, the reports exchanged and if possible some of the "dialogue" of the QSO.

My conscience would not allow me to generate a reply without the above as a minimum. The reasons being that the listener requesting the card in my mind has to have genuinely heard the full contact and it is therefore then a valid report. This alleviates the problems associated with some SWLers of when they receive a card, they pass the info onto their mates, friends, acquaintances and sundry acquaintances of acquaintances. Within months the Bureau cards arrive and one finds that you have a multitude of cards to send out to people for the one contact who are building up the score on the "mate" system.

I know that these remarks are going to generate a "storm", but one, it is felt, has to be logical in such a situation.

VOLUNTEER REQUIRED

In the July magazine this year I will have completed four years of writing this column. Up to the present I have enjoyed, and still hope to until the end of that period, writing the notes. The generation of the notes has been at times fun, frustration, the occasional scoop, magnificent co-operation from many participating members, innumerable letters with information, some seeking QSL data, many of praise from readers who have gained a new one or have got a much wanted card by the info that has been printed. On the other side of the coin one could count the letters received from the disgruntled on one hand.

Not to be overlooked is the valuable information that has been gained from reading newsletters and magazines, receiving telegrams, telexes and the occasional international phone call or a call whilst on the band.

This prelude adds up to the fact that I would like to see a fresh approach to the column in the August issue and that means a new DX Editor who is willing to generate, in typewritten or neatly written form, the information that the reader requires, ready for typesetting by the deadlines each month.

I appeal for anyone interested to contact me at the above address for further details or contact the Editor, Bill VK3ABP, via the Executive Office.

ZAIRE

Johannes 9Q5JE is still active on 10 and 15 metres and expects to go QRT in April this year. QSL to the Club Station DK0HT either direct or via the Bureaux.

SAO TOME

Dias PS7ABT/S9 was by all accounts duly authorised and he is unlikely to appear again. This operator was from a Brazilian Naval vessel and he operated from the island of Principe. By all accounts another vessel will visit the area within the next year and it is trusted that an amateur orientated ship's Radio Officer can be persuaded to take a rig ashore and obtain a licence.

The S9 and PY authorites have an understanding on reciprocal licencing. I, like many others, would appreciate knowing the secret! It is a case of observe, wait and trust that it is acceptable!

SYRIA

Two more YLs licenced. SU1RR Rehab and SU1SR Sally, both daughters of SU3AM. Others are SU1HK Hosni and SU1IA Ibrhim. Congratulations to the newcomers.

WARC BANDS

The FCC, the governing authority on licensing in the United States has released the entire 10MHz WARC allocation to American amateurs. The 18 and 24 MHz bands will not be released before 1989 at the earliest!

ETHIOPIA

The stations ET3PG and ET3PS are not at present good for DXCC. The QSL Manager could be Franz DJ9ZB and if he is handling the cards there is a good chance that these calls will receive the "nod" as being acceptable.

Franz is well known and is a stickler for doing the right "thing" by all and he could extract the necessary documentation for forwarding to Don Search at the ARRL DXCC Desk.

It is possible the operators are using the Police Radio system and it can be appreciated that the hobby would have a very low priority in that country according to all the media reports.

UNITED ARAB EMIRATES

A61AA has been quite QRV from this area using a commercial log periodic antenna system. All QSLs go to ever "Mr Reliable" Roger G3LQP. Contrary to rumours, Roger has a translation of the licence and other documentation which is being forwarded to the ARRL.

A PIRATE

In a letter from the Botswana Amateur Radio Society (BARS) dated 15/11/1984 to DX Editors is reprinted in full for all operators' information as hereunder.

"SUBJECT: ZS6BUX/A22 or ZS6DM/A22 ILLEGAL OPERATIONS.

"Gentlemen,

The Botswana Amateur Radio Society, would like to bring to your attention, Mr Miodras Jovanovic, ZS6BUX/A22 or ZS6DM/A22 who was illegally practicing a DX-Expedition Operation within the borders of the Republic of Botswana on October 27, 1984.

"The Botswana Telecommunications Corporation, along with the Ministry of Public Works and Communications REVOKED Mr Jovanovic's Temporary Botswana Amateur Radio Licence as of the 27th September 1984.

"The Botswana Amateur Radio Society, strongly urge the American Radio Relay League to withdraw Mr Jovanovic's calls ZS6BUX/A22 or ZS6DM/A22 from the DXCC list of stations.

Signed A22ME Secretary."

Quite harsh words one would say but the Botswana Telecommunication Commission were more explicit in their letter of cancellation as the following extracts show.

"I would like to make one thing quite clear to you, and that is the destruction that you have caused to the Botswana Amateur Association and the Government of Botswana to the world is irreparable.

"My office cannot tolerate or comprehend why you chose to brand our nation so badly moreover the hospitality of the Selibe-Phikwe Radio Association that hosted you into their town.

"Please be aware that your temporary licence operation privileges are revoked as of the 27th September 1984 for ever.

Yours faithfully,

Signed: J. M. B. Skeete."

One must admit that these strong words supporting the positive action removed the "man" from the bands but I really would like to know what he said or did to incur their wrath. *Does any reader know the facts?*

PIRATES AGAIN

Edmund who is in charge of HV2VO would like it known that he is being impersonated. In other words some Italian station or stations are using HV2VO on CW. Brother Edmund does not use this mode and if he has a visitor who desires to use CW, he announces the fact on SSB at the same period. *Any VK been caught yet?*

Father Edmund operator at HV2VO pictured with Jan K6HHD co-editor of Jan and Jay O'Briens QSL Manager List.

Photo courtesy of QRZ DX

ANOTHER WORD ON PIRATES

There have been several pirates "active" from Cape Verde over the last decade since the country was granted independence. Only two licenced amateurs are acceptable, those being Julio D44BC and Angelo D44BS who are duly licenced with the authorities in the Republic and all cards should be sent direct, as there is no QSL Bureau and neither of the gentlemen have Managers.

KERGUELEN ISLAND

A late letter has been received from Rousselet Michel to say that FT8XB will be operational from Kerguelen this year. The letter is as follows:

I'm a French amateur and will be making an expedition to Kerguelen Island in the South Indian Sea during 1985. My call is a new prefix for DXCC; FT8XB and I will be QRV all HF bands 80m, 40m, 20m, 15m, 10m, with a DX frequency of 14.190 MHz ± 5 kHz. Equipment will be a FT 757 GX + linear + a 3 element 20m beam and dipoles on all bands. I'm also QRV on OSCAR 10 with 60 W with a 21 element yagi and EME (Moon Bounce) on 144 MHz with a 4 x 20 element antenna 2 kW (beginning in April).

PSE QSL ONLY direct with 3IRC's to FT8XB, PO Box 83, 95101 ARGENTEUIL Cedex, FRANCE, Europe.

CLIPPERTON 1985

The Clipperton 1985 DXpedition is due to leave San Diego on the 27th March, returning on the 18th April. Revilla Gigedo XF4 may be activated for twenty four hours on the outward and return voyages.

It is hoped that the very dedicated operators who lost some $US14,000 over the last venture, and this didn't include air fares, make it this time and propagation is very kind to them. It is anticipated that this trip could cost in the vicinity of $60,000 all up. Quite a sizable expenditure considering conditions of late!

24 MHz

A direction has been issued by the ARRL Board of Directors to the Plans and Programmes Committee to study what existing and/or new DXCC awards, if any, should apply to the 24 MHz band and what considerations should apply to such awards.

VANUATU

New regulations permit the YJ0 prefix to be allo-

cated to non-resident or short term resident bonafide amateurs. Long term residents, including expatriates on long term employment, will continue to be allocated two letter suffixes with the YJ8 prefix. Any /MM calls will only be legitimate for use within Vanuatu territorial waters.

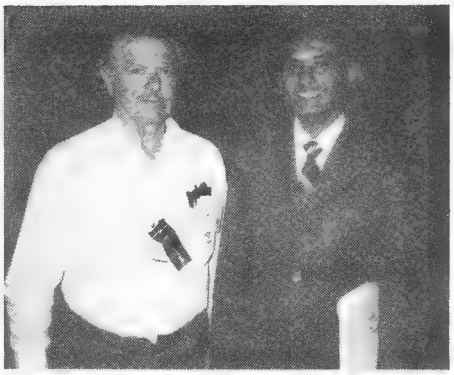
FAMOUS FACES AT VISALIA 1984

Bill W6VZZ (L) chats with Mario I0MGM.

Mario I0MGM, an Attorney of Law in his home country, is widely known for his dedication in gaining DXCC status for the Knights of Malta amateur station 1A0KM, and the ensuing efforts of keeping it activated whilst also being its main QSL Manager.

The "terrible trio" TI9CC, TI9CF and TI9JVA.

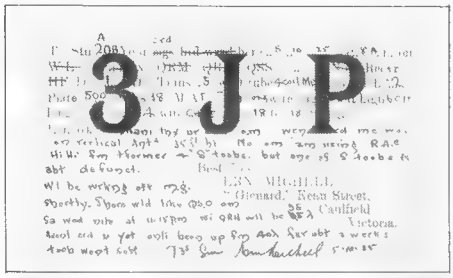
Chito DU1CK.

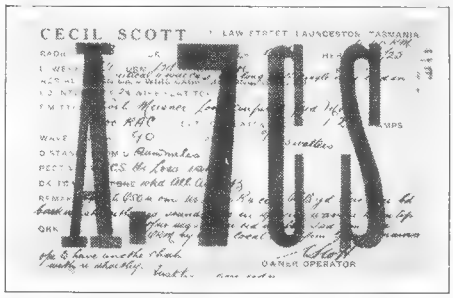


WB6DXU and Gopal VU2GDG.

CARDS OF YESTERYEAR

Nostalgia again! Some more cards that confirm QSOs of over half a century ago. The cards have been supplied by Arthur VK2JM.





Photographs courtesy of QRZ DX.

QSL MANAGERS

Mark WA60TU has advised that he is QSL Manager for 9K2DX, 8P6CW, 8P6J, KV4FZ 1983 CQWW CW only, N6TJ/TI2, N6TJ/EA9, EA9KF 1984 CQWW CW only and his new QTH is 789 Brookside Lane, Sierra Madre, California 91024 USA.

Bill N4NX, has written a note and included the stations he acts as Manager for. These include all of Martha Henderson's DXpeditions which include WN4FVU/5X, 3D6, A22, TT8AC, 3C0AC and the two stations FR7ZL/T and ZL4LR/A.

IRC'S NOT PROCURABLE

A note from an amateur in Poland advises that IRCs are no longer available in that country also that foreign currency is impossible to obtain. It looks like a 100 percent Bureau mailing for all cards from this country in the future!

LARGE ENVELOPE PLEASE

Denise VK0YL's QSL card is 160 by 100 mm and will not fit in an Australia Post preferred size envelope. For those amateurs and SWLs requiring a direct card please send a self addressed envelope to suit and adequate postage. Thankyou.

CARD OF INTEREST

A special card of interest has been submitted by Stephen VK2PS. Stephen held the SWL allocation of YRR 57 during the years of 1936-1939 and the card reproduced was his first encounter with the VK/ZL contest. The reverse side of the card notes *"THE CONTEST COMMITTEE thank you for your co-operation in making the 1938 VK-ZL the "Contest of*

Contests" — WG Ryan VK2TI, Contest Manager. VK2RA, VK2HP, VK2YC, VK2PX, Committee". Stephen topped the section in YR (now YO) that year of the "Australia's 150th Anniversary Celebrations".

Stephen is now the VK2 Federal Councillor who will assist in celebrating the 75th Anniversary of the WIA on the other side of the world as a member. Congratulations Stephen for your initial achievement and persistence over the years with the hobby.

BITS AND PIECES

The QSLs for CE0AA did not come as a Christmas present as predicted as they were to be held until the festive season mail rush was over so they would not be lost! ★★★★ UA9OO/YA was heard in Europe. He claimed to be near the Soviet/Afghan border?? ★★★★ Jukka OH2BJL made many QSOs as T52JL before going QRT late last year. ★★★★ Malta was well represented on the bands when 9H3DH (DF8ZH), 9H3DI (DL1RK), 9H3DJ (DL1ZQ) and 9H3DK (DF4ZL) made an CW onslaught late last year. All QSLs to DF8ZH. ★★★★ Alain 5R8AL has been very active on CW and SSB. ★★★★ Do not discard (which would be sacrilege) your 4U1VIC card, it may yet come good. ★★★★ The Pribilof Island debate still drags on but I would also file those cards in a safe place to keep the cobwebs off them. ★★★★ Nice to hear 1A0KM on as a Christmas present for those requiring it. ★★★★ Gerry 5X5GK has still not untangled his problems which have been generated within and between Ugandan Government Departments. ★★★★ HU1DX is sponsored by YSDX, a new DX club in El Salvador. ★★★★ Father Dave CE0AE still plugging away at 10 metres and having a little success. ★★★★ Marion Island ZS2MI, should be activated by a permanent operator this year. ★★★★ More BY stations to be activated soon. ★★★★ Don't overlook a 3Y Bouvet operation of unknown duration at any time in the next few weeks. ★★★★ GB4DIS/MM is a group of Welsh expeditioners aboard the RRS Discovery whilst in Antarctic waters. ★★★★ Some VK0 6 metre operation heard in VK and ZL ★★★★ The call ZX0ECF is being used by a Brazilian expedition to the South Pole. ★★★★ 8J1RL is the call of a Japanese scientific expedition in Antarctic waters. The operator is JR1FVH who is also responsible for the cards. ★★★★ Remember Feng who operated XW8BP more than a decade ago? He has just passed his licence test, the first to be held in BV, in October last year and should be active again soon. Massy JH1ARJ, still has the logs for that operation if anyone still requires a card. ★★★★ "Project Blizzard" station AX0PB will be returning home early next month and preparing for the next voyage scheduled for November. Neil VK6NE, the group's QSL Manager, requests no direct cards until he receives the logs in April this year. ★★★★ 3Y0AA (whereabouts unknown) has been heard but the licencees JF1IST and JR1HHL at the time of writing were still in JA with transportation worries!!! Their other worry is how to land even if conditions are ideal. ★★★★ The Japan Radio Ladies Society (JLRS) will make their first DXpedition this year. The venue is the Maldives and they hope to be operational on CW and SSB the 12th and 17th of this month.

OOPs! AN ERROR

Inadvertently the QSL information for OY8R was given in the November magazine as PO Box 88, Moscow. This is definitely a NO NO and it should have read PO Box 343, DK-3800 Torshavn, Faroe Islands or preferably now to Ray at his home call of W0IIM. Apologies to all those that were inconvenienced.

THANKS

Sincere thanks go to the following. The Editors of weekly, bi-weekly and monthly newsletters including the ARRL NEWSLETTER, RSGB DX NEWS, QRZ DX, LONG SKIP, DX FAMILY FOUNDATION NEWSLETTER, JAN and JAY O'BRIEN'S QSL MANAGER LIST and KH6BZF REPORTS. Magazines including CQ, cqDX, QST, RADCOM, JARL NEWS, KARL NEWS, OZ, WORLD RADIO, BARS, 73, BREAK IN and VERON

Members who have contributed include VKs 2JM, PS, 3BY, EW, FR, XB, YJ, YL, 4BHJ, and G3NBC. Overseas amateurs include A22ME, G1EOD, I8SAT, JH1KRC, N4NX, WA6OTU, OH2BBF and ON7WW. Sincere thanks to one and all.

QSL ROUTES

1Z9A:JA8IXM, 3A2AF:F5RV, 3A4E:F9RM, 3A4F:3A2LF, 3D2FR: NE4S, 3D6AA·KB5DQ, 3D6AK:G3WPF, 3D6AN:WK4Y, 3D8CW:G4BAC, 3X4EX:N4CID, 4K1ANO.RA3AR, 4K1CEY: UY5DJ, 4K1GAG:UQ2OC, 4N9V:YU4CA, 4U39UN:W2MZV, 4U9ITU:W1RR, 4V2C.W5VUX, 5H3LB:SM5CPC, 5L8M·EL8M, 5N8FOC·G3TXF, 5R8AL:WA4VDE, 5T5CS:F6FNU, 5T5RD: F6IIA, 5V7NG:WB4LFM, 5W1DQ:KB6JK, 5W1EZ:JE1JKL, 5X5GK:JA1BK, 5Z4BF:N4IBT, 5Z4DU:N4IPT, 6W1NQ:DL1HH, 6W8AR:WB4LFM, 6W8DS:WA4OVE, 6W8HL:WA4VDE, 6Y5IC: KE3A, 6Y5MC:WA4WTG, 7P8DF:DJ1TC, 8J1ITU.JA1RL, 8Q7BX:I4ALU, 8Q7OW·DJ2OW, 9H1EL:LA2TO, 9I2O:9J2BO, 9J1NO:DL5FX, 9K2BE:G4GIR, 9L1GA:N1AGK, 9Q5MA: K1VSK, 9U5JB:ON5NT, A22CA:AK1E, A22WZ·OE3NH, A35JM: K7KK, A35WW.JA5DQH, A4XJW:N4WF, A4XKC:KA1XN, A6TJC:PA3AUA, A71BK:G4HNP, A92DY.W8LU, A92DZ: G3VIE, AH8A:K6EDV, AH8B.NE4S, AP2ZA:W6NLG, AX0PB: VK6NE, BV8JA:JA8IXM, C30LAZ:EA3DDP, C31IU:W8JAQ, C53CL:EA8ZZ, CE0FCM/CE0Z·WB6WOD, CO2KK:KE5KK, CO7RG·CM7RG, CT1AV:WA3HUP, CT2EV:WA3HUP, DA1WA/ HB0:DJ0LC, EL2EF:KM8E, EL2FJ:JF2QHC, FB8WJ:W4FRU, FE5RV·TO5RV—F5RV, FG0HLI/FS7:N6DX, FM7CD·F5FU, FM7WD.W3HNK, FO8CX—FO8DF—FO8FB—FO8HI—FO8HL - FO8HO:WB6GFJ, FO8JP:F1BBD, FR7BP W0AX, FW0BX: ZL1AMO, HC1EA:W2KF, HH2VP:W1FZ, HH2WL:KM7Z, HH2WW:N4WW, HI8LC:W2KF, HK0EHM:WD9DZV, HK0HEU: HK0FBF, HL9AH·N7DOF, HL9JT:N2AEW, HL9TA.K0LST, HP1AC KM7Z, HZ1AB·K8PYD, IY4FGM:I4IKW, J3AVT: W8UVZ, J37AH:W2GHK, J39BS:WB2LCH, J6LJG.W2LZX, J88AQ:W2MIG, JT0DJT:I8YGZ, JW0EQ:LA5NM, JY5CI: G4WFZ, JY9TS·WA3HUP, ON6TZ/4S7:ON6TZ, OX3GH: WA2TTI, OZ1FFG/OY:OZ1FFG, OZ5DL/OY:OZ5DL, OZ5UR/ OY·OZ5UR, OZ8AE/OY:OZ8AE, PA0VDV/PJ2:PA0VDV, R0K:UA0KCL, SZ2COT·SV2SV, T32AB.N7YL, T32AF:KH6UR, TI9CCC.TI2CCC, TI9J:TI2J, TI9RCM:TI2RCM, TJ1AF: WA4VDE, TJ1QS.F6DZU, TL8DR:W2PD, TL8ER:F6GQK, TL8TX:K0VZR, TT8CK F6EWM, TT8CW:F6GXB, TZ6FE DL4BC, UI1CWW:UK1CAA, V2AS:OE3ALW, VK0PB:VK6NE, VK0RK.VK2DEJ, VK0YL:VK3AH, VK9ZR.VK6YL, VP8ASR· G4GHP, VQ9DG:WA3HUP, VQ9JR N6AVV, VQ9YR:KA4SPA, VU2JXO.WA3JLB, XE2FU:K5RC, XL1CV:VO1CV, XN3EUP VE3EUP, XN5RA:VE5RA, XT2BJ:DL6FAL, XU1SS:JA1HQG, XU1YL:JA1HQG, YN1FI—YN1QG:VE3DJO, ZD7CW:N4CID, ZD9CC:ZS2DK, ZD9SB:G4KIV, ZF2IB:4Z4DX, ZK1XC: PA3BFM

QSL ADDRESSES

3D6AL	PO Box 64, Manzini, Swaziland
9J2LG	PO Box 30441, Lusaka, Zambia
9K2DZ	PO Box 1262, Kuwait
9Q5RN	PO Box 12646, Kinshasa, Zaire.
AH2AZ	PO Box 445, Agana, Guam
BV0JA	JG1QGT, PO Box 12, Shinjuka, Kita, Ochiai, Tokyo 161, Japan
BY1QH	PO Box 2654, Beijing, Peoples Republic of China.
C53ES	PO Box 553, Banjul, The Gambia
CN8MC	PO Box 299, Rabbat, Morrocco.
CO2HQ	PO Box 1, Havana, Cuba.
CO2OM	PO Box 4940, Havana, Cuba
EL2EN	PO Box 2668, Monrovia, Liberia
GJ2LU	PO Box 338, St Helier, Jersey
H44IA	PO Box 219, Honiara, Solomon Islands
HI3HRD	PO Box 272, San Francisco, Dominican Republic.
HU1DX	YS DX Club, PO Box 05-43, San Salvador, El Salvador.
J37FH	PO Box 29, St Georges, Grenada
KX6GO	PO Box 8387, APO, San Francisco, Ca 96555 USA
S79SM	PO Box 84, Mahe, Seychelles
TT8CW	PO Box 70, F-91605, Savigny Cedex, France
VU2GI	PO Box 6674, Bombay 50, India
YS1TG	PO Box 1476, San Salvador, El Salvador.
XN3XN	Canadian DX Ass, PO Box 333, Ontario, N4W 9Z9, Canada
XX9CT	PO Box 12727, Hong Kong
YV0AA	PO Box 2285, Caracas 1010A, Venezuela
ZB2HG	PO Box 292, Gibraltar
ZP5AO	PO Box 1554, Asuncion.
ZS1YL	PO Box 878, Belleville 7520, South Africa

SOME STATIONS WORKED ON THE EAST COAST

15 METRES

BY1PK, T32AF, ZK1XC, ZL1BYB, ZL4AW

20 METRES

1A0KM, 1Z9A, 4K1GAG, 4S7NMR, 4X4DX, 4X4KR, 5N3RTF, 6Y5IC, 8P6AE, 8P6PT, 8R1RBF, 9U5JB, 9J2BO, 9M2DF, 9V1VC, 9V1WA, A35MP, A35SA, A4XJV, A4XJW, A4XKB, A4XKD, A4XKH, A4XND, A4XYR, AH2AW, AP2ZA, BY4AA, BY5RA, BY8AA, C21RK, CE0AE, CE3ACA, CE3AQN, CP1CQ, CP1RI, CP5RK, E12CN, EA6BH, EI7CW, FH4AA, FK0ATP, GW4NZ, HA6OD, HB9CNI, HB9CSU, HC1HC, HC1OT, HI8LC, HL9TX, HP1XOL, HU1DX, HZ1AB, IY4FGM (Marconi Memorial Station), J37AH, JY3ZH, JY5OL, LU5CAB, LU5DRH, LU9EDY, LZ2YJ, OA4AYY, OH0BA, SU1ER, SP9PDF, SV1NA, TI1C, TI3EMS, UD6DZ, UJ8JCQ, UQ2GM, V85HK, VK0AQ, VK0EK, VK0GC, VR6KY, VR6TC, VU2AIJ (YL), VK0YL (YL), VQ9DG, VQ9DW, VS6CT, SV5YS, SV8RX, TR8CR, YJ8JH, YJ8RG, YO3FG, YO6AKN, YV5LTA, XX9CW, XX9DX, ZD7CW, ZK1CG, ZK2IK, Z21J, Z21JO, ZS2OM, ZS5G

40 METRES

BY4AA, CT1DF, CT1FL, CT3NL, CT4NW, DJ6EA, EA9IE, FW0BX, FW0BX*, XN7DZR

** Denotes CW*

INTERESTING QSL's RECEIVED

4K1D, CP5LK, KX6DS, LU4MEE, LZ2RS, VK9LW, VK9LX Y78XL, ZL7AMO.

CW SWLing WITH ERIC L30042

28 MHz

JH1LME, JA3QGI, JA6YDH, VI3EZ/P, VK2,3,4, YU3MA, Beacons VK2RSY, VK4RTL, VK6RWA

21 MHz

HB9AVW, HL1BLA, HL0Y, JA6FQE/MM, KH6IM, RC2CF, UJ8JD, VU2OBY, YC4FNN, YC7UW, YC9ZEL, YC0DNK, 4S7DO, 9V1VD, 9V1WG.

14 MHz

AH2C, C21FS, K1BAZ/DV1, FK8EY, HK1AQ, HK1AMW, HL1DC, HL4CAE, KG6JJH, KL7UR, KX6LA, LA7XL, UH8ED, RW9US, VI3WI, VS6TA, XE1XF, YB2BNJ, YJ8TT, YV1TO, 9Y4VVT.

10 MHz

F3NB, G8FW, JF1IFP, JH2FKX, JA3SVG/MM, VI3WI, VM4AAA, W1ZLG, K2VA, W3DWI, K4EU, N5VV, ZL1BSG, ZL3BJ.

7 MHz

CT1LF, CT2CQ, BV1CH/MM, DK0TU, EA1AYQ, EA2OG EA4MT, F2MA, FM7WD, HA8GZ, HB4FF, HB9CVK, G3UJE, HG19HB, HZ1AB, IK5ZQO, IK8AHH, IT9PZF, KJ9W/KH2, N5BJ/KH8, KX6DS, LX1PD, LZ1UF, OE3ZOC, OH8SR, ON5UK, OZ1JHJ/MM, UA3GAK, UA2FX, UP3BA/UF, UD5GQ, UR2FU, UZ9AWZ, RC2AB, RB5QA, P29PL, TI2SKY, VP2VCW, N3RD/VP9, YB5ASO, YU4FDE, 4Z4NUT, 5H3BH, 5W1EZ, 9H3DK.

3.5 MHz

DL1VU, JA1CGM, JA2YKA, JF6DPM, KX6DS, RB5II, RW3QQ, SM7ALC, UZ9SWY, VI3WI, YD1FFH, ZL7OY.

1.8 MHz

VK3BEE, VK3DGJ, VK5KL.

QSLs RECEIVED BY ERIC L30042

A4XJP, A9XC, BV2A, CX6CW, CT2CQ, K1BAZ/DV1, EA5YU/EA8, FO8JR, FY7YE, GI4FUE, HA4ZZ (3.5), HL5GZ, KC6WS, NP4BN, LU7XP, W1AEL/PJ4, W2BBK/PJ7, T30AT, UJ8SAO, UK7RDX, VK9LW, VP9AD, W0KEA (1.8), SV0AA, YV4BOU, ZK1WL, ZL7OY, 4S7BBG, 4X6GP, OH6XP/4U, 5Z4CQ, 9H1EL and 10 MHz DJ2LS, DL4DX, DL7AFV, DJ7PW, F6HNX, F9YZ, TO6AAX, G3BDQ, GW3EHN, OZ1W, OZ1LO, T30AT, VE3FZR, VU2UGI, W1CT, W1OO, 5Y4CS, 9H1BB

AR

PHOTO CORNER

Further to the Japanese Tour page 18, December AR.

Group photograph taken outside Japan CQ Headquarters.

Photos by Peter Rodgers VK5KJT

Hiroshima Kangaroo DX Group.
L to R: JE4ERR, JE4WWT, JE4KGL, JE4MMP, XYL of VK5KJT, VK5KJT, JA4TYD, JE4NBF and JR4PWA.

MURPHY'S LAWS

As someone once said "Murphy's laws and electronics were so obviously made for each other!" For the benefit of those who have heard of Murphy but not seen his work before, here it is, kindly submitted by Russell Lemke VK3ZQB, 22 Villiers Street, Port Fairy, Vic 3284). The original source is lost in history.

GENERAL

[1] In any field of scientific endeavour, anything that can go wrong, will.
[2] If the possibility exists of several things going wrong, the one that will go wrong is the one that will cause the most damage.
[3] If nothing can go wrong, something will.
[4] Left to themselves, things always go from bad to worse.
[5] Nature always sides with the hidden flaw.
[6] Given the most inappropriate time for something to go wrong, that's when it will occur.
[7] Mother nature is a wench.
[8] If everything is going well, you have obviously overlooked something.
[9] Never make anything simple and efficient when a way can be found to make it complex and wonderful.
[10] If it doesn't fit use a bigger hammer.
[11] In an instrument or device characterized by a number of plus-or-minus errors, the total error will be the sum of all the errors adding in the same direction.
[12] In any given calculation, the fault will never be placed if more than one person is involved.
[13] All warranty and guarantee clauses become void upon payment of final invoice.

DESIGN

[1] In any given price estimate, the cost of equipment will exceed estimated expenditure by a factor of three.
[2] Dimensions will always be expressed in the least usable terms. For example, velocity will be expressed in furlongs fortnight.
[3] If the breadbox trial model functions perfectly, the finished product will not percolate.
[4] In a mathematical calculation, any error that can creep in, will. It will be in the direction that will cause the most damage to the calculation.
[5] In any given computation the figure that is most obviously correct will be the source of the error.
[6] The probability of a dimension or value being omitted from a drawing is directly proportional to its importance.
[7] In specifications, Murphy's law supersedes Ohm's.

ASSEMBLY

[1] If a product requires *n* components, there will be *n*–1 components available.
[2] Interchangeable components won't.
[3] Components that must not and can not be assembled improperly will be.
[4] The most delicate components will be dropped.
[5] The construction and operation manual will be discarded with the packing material. The garbage truck will have picked it up five minutes before the mad dash to the rubbish can.
[6] The necessity of making a major design change increases as the assembly and wiring of the unit approach completion.
[7] A dropped tool will land where it can do the most damage (also known as the law of selective gravitation).
[8] A component selected at random from a group having 99% reliability will be a member of the 1% group.
[9] Tolerances will accumulate unidirectionally toward maximum difficulty of assembly.
[10] The availability of a component is inversely proportional to the need for that component.
[11] If a particular resistance is needed, that value will not be available. Furthermore, it cannot be developed with any series or parallel combination.
[12] After an instrument has been assembled, extra components will be found on the bench.

WIRING

[1] Any wire cut to length will be too short.
[2] Milliammeters will be connected across the power source, voltmeters in series with it.
[3] The probability of an error in a schematic diagram is directly proportional to the trouble it can cause.

TESTING

[1] Identical units tested under identical conditions will not be identical on the final test after being buried under other components.
[2] A self starting oscillator won't.
[3] A crystal oscillator will oscillate at the wrong frequency if it oscillates.
[4] A P-N-P transistor will be found to be N-P-N.
[5] A fail safe circuit will destroy others.

OPERATION

[1] If a circuit cannot fail it will.
[2] A circuit protected by a fast acting fuse will protect the fuse by blowing first
[3] Probability of failure of a component is inversely proportional to the ease of repair or replacement.

TROUBLE SHOOTING

[1] After the 24th cabinet to chassis screw has been removed to replace the under chassis fuse, it will be observed that the line cord plug has become disengaged from the AC receptacle.
[2] After the 24th cabinet to chassis screw has been assembled, the driver tube will be found under the schematic on the bench.
[3] The bleeder resistor will quit discharging the filter capacitors, as the operator reaches into the power enclosure.

PROGRAMMING (PECK'S PROGRAMMING POSTULATES — WITH ADDENDA BY GLASSER);

[1] In any programme, any error that can creep in eventually will.
[2] Not until the programme has been in production for at least six months will the most harmful error be discovered.
[3] Any constants, limits, or timing formulas that appear in the computer manufacturer's literature should be treated as variables.
[4] The most vital parameter in any sub-routine stands the greatest chance of being left out of the calling sequence.
[5] If only one compiler can be secured for a piece of hardware, the compilation times will be exorbitant.
[6] If a test installation functions perfectly, all subsequent systems will malfunction.
[7] Job control cards that cannot be arranged in improper order will be.
[8] Interchangeable tapes won't.
[9] If more than one person has programmed a malfunctioning routine, no one is at fault.
[10] If an input editor has been designed to reject all bad input, an ingenious idiot will discover a method to get bad data past it.
[11] Duplicated object decks which test in identical fashion will not give identical results at remote sites
[12] Manufacturer's hardware and software support ceases with payment for the computer.
[13] At least one critical tape will be lost, misplaced, destroyed or written over
[14] What goes up must come down — and can be expected to do so in the middle of your job.

FINAGLE'S LAW

[1] No matter what result is anticipated, there is always someone willing to fake it.
[2] No matter what the result, there is always someone eager to misinterpret it.
[3] No matter what happens, there is always someone who believes it happened according to his pet theory.

FINAGLE'S CREED

Science is truth; don't be misled by facts.

ALLEN'S AXIOM

When all else fails, read the directions.

GUNNERSEN'S LAW

The probability of a given event occurring is inversely proportional to its desirability.

GLASSER'S COROLLARY

If of the 7 hours you spend at work, 6 hours 55 minutes are spent working at your desk, and the rest of the time you chat with your cubicle-mate, the time at which your supervisor will walk in and ask what you're doing can be determined to within 5 minutes.

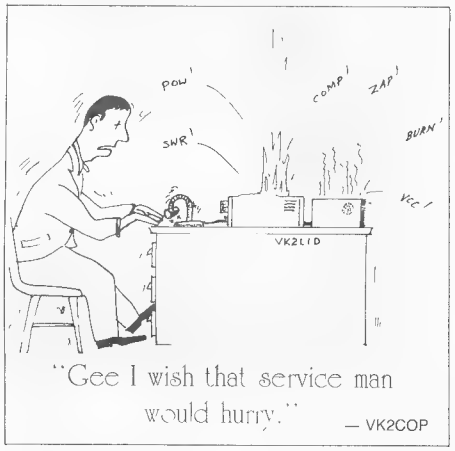
SOME VITAL THINGS TO REMEMBER WHEN DOING LAB WORK

[1] When you don't know what you are doing, do it neatly.
[2] Experiments must be reproduceable. They should fail the same way each time.
[3] First draw your curves, then plot the data
[4] Experience is directly proportional to equipment ruined.
[5] A record of data is essential, it shows that you were working.
[6] To study a subject best, understand it before you start.
[7] If you can't get the answer in the usual manner, start at the answer and derive the question.
[8] To do a lab job really well, have your report done well in advance.
[9] If it doesn't work, start at both ends and try and find a common middle.
[10] In case of doubt, try and make it convincing.
[11] Do not believe in miracles, rely on them.
[12] Team work is essential, it allows you to blame someone else.

FURTHER HINTS ON WRITE-UPS

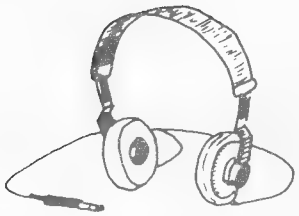
[1] In any collection of data, the figures that most closely confirm the theory are wrong.
[2] No one you ask will see the mistakes either.
[3] Everybody who stops by with unsought advice will see them immediately.
[4] If an experiment works, you must be using the wrong equipment.
[5] An experiment may be considered successful if no more than half the data must be discarded to agree with the theory.
[6] No experiment is ever a complete failure. It can always serve as a bad example.

AR



"Gee I wish that service man would hurry." — VK2COP

"I'm sorry OM — did you say WWV?" — VK2COP



LISTENING AROUND

Joe Baker, VK2BJX
Box 2121, Mildura, Vic 3500

During my time at Pine Creek, when the Northern Territory was still being raided by Japanese Zeros, there occurred two incidents which have left a life-long impression on me. Both incidents occurred in the one week, but at this distance of time, I'm not sure of the chronological order in which they occurred. The two incidents concern, Spitfire pilots that were in trouble and a head-on collision of military vehicles at Pine Creek in which one of our officers, and an RAAF truck driver were killed.

Let's take the story of the "Spitties" first. At about this time, there were a number of English Spitfire pilots flying aircraft in the Northern Territory. This particular day, a Sunday morning, we heard the omnious drone of an aircraft approaching the Pine Creek airstrip at the back of our Signal Office. It was the normal custom of an army mail plane (which was the way we despatched and sent letters home) to land here about 11 am on week-days but **never on** Sunday, so we realised that the visitor was not the regular mail plane. Looking up at the circling aircraft, it was obvious that it was in trouble, so as it headed for the landing strip, a number of sigs took off for the strip also. We ran fast and got there just as it touched down. When the plane came to a stop, a very frightened fighter pilot emerged from its controls and asked who we were. He was as white as a sheet, with good reason.

From his story, it appeared that a short time earlier, he and a mate in another Spitfire had passed over Pine Creek on the way to Gorrie (near Katherine) where they were taking the two aircraft for some sort of overhaul. As they passed over the Ferguson River, our pilot said the other plane appeared to be in trouble as its engine was spluttering, and he quickly decided to bail out. Our man tried to frantically call Darwin by radio but received **no answer,** he then had the awesome spectacle of seeing his mate **landing in the flames of his crashed plane.** To add to the strife, just as our pilot was returning to Pine, his own engine started to cut out. He asked us could we get a message off to his base, letting them know what had happened, and to send a part for his aircraft.

We lost no time in getting the message off, and in arranging for the replacement part to be sent, which arrived by train the following day. We also arranged for the RAAF at Pine Creek to give the English pilot overnight accommodation.

The following day, we sigs followed the pilot down to the strip where he fitted the replacement part. He thanked us for our assistance, and although still nervous because of the happenings of the previous day, said he'd attempt a take off, but, just to make sure that all was OK, would fly over our strip several times before going on his way. Reassured that all was now OK with his Spitfire, the last we saw of him was disappearing into the clouds.

The second incident occurred a few days later about 7 pm just as I had started the night shift in front of the switchboard. Because there was an open air picture-show at Pine that night, I thought that I would have a quiet night, and settled down to read some books. It had been the custom of any sigs attending the open air pictures to take the portable telephone to the site, in case anyone at the show was wanted. But this time the portable telephone **was out of order.**

Somewhere about 8 or 9 pm, my reverie in front of the board was shattered when the shutter connected with McDonnel Strip dropped, and a very excited voice cried out *"Accident — accident — get the army and RAAF ambulances!"* and then hung up. I tried to call McDonnel Strip back but there was no answer. Suddenly I realised that army and RAAF personnel would be at the open air pictures — and the portable phone was out of order. What to do? Not realising at that time that Pine Creeks sole civilian Constable was involved in the accident, I tried to raise the Pine Creek Police station, because it was near the site of the open air picture show. Instead of the Constable answering I was greeted by the voice of one of our army linesmen who happened to be up a telephone pole working on the line. When I told him that I wanted an urgent message sent to the picture show site immediately, the linesman said that he himself, would deliver it.

From my location in front of the switchboard I could hear the sound of the picture show. Suddenly the sound was interrupted, and an unknown voice summoned Army and RAAF ambulance crews to McDonnel Strip as soon as possible. About 9 or 10 pm when the show ended and the picture goers returned to their units, I began getting a series of calls, asking if I had any further news as to what had happened at McDonnel Strip. Everyone was still thinking in terms of the Spitfire incident. But I was still unable to raise them.

A couple of hours later, a military vehicle drew up outside the signal office and out stepped the police Constable **covered in blood.** *"Captain Pickett (area officer of Pine Creek) and an RAAF truck driver are dead. Please Joe, listen in on all calls to Katherine, and if anyone mentions me, cut them off will you?"* I asked him for further details and it appears the policeman, and Captain Pickett were returning from a Tivoli concert party, when they rounded a bend and crashed head-on into the RAAF vehicle. Johnno, the policeman, said that his wife was in hospital at Katherine having a baby and that's why he didn't want her to know about what had happened. I offered him a cup of tea but he declined saying that they would have to drive through the night (no streetlights up there then) to take the two bodies to Katherine.

When he left our signal office, I asked permission of our corporal to phone Katherine hospital alerting them to the arrival of Constable Johnstone and the deceased, as Constable Johnstone would need medical attention himself. Permission for me to make the call was **REFUSED,** but after our corporal was out of sight, I took it upon myself to defy this order. The matron at the hospital thanked me very much for alerting them, assured me that she personally would ensure that Constable Johnstones wife was not told that her husband was injured and on the way to the hospital.

A few days later, Constable Johnstone was back in Pine Creek and none the worse for the incident despite some superfluous injuries.

In due course, the baby was born, and according to what I later heard, in its own right it became famous as being the first baby born to a civilian in the Northern Territory since the bombing of Darwin. Because of the war, war correspondents were everywhere and it appears that a BBC correspondent in the Northern Territory got wind of the birth, and it was announced by the BBC in London.

I was very pleased to make contact on air on 80 recently with Mike VK3PID, of the Basin, in the Dandenongs. Mike had not had his call for very long and when I first heard him he was using an ex World War Two Type 122 set on AM. I was at first listening on sideband, but could hear his AM signal, but eventually I found it best when I switched to AM for his signal and came back on sideband. He said that although 40 years old the 122 was in what currency dealers would call "mint condition." Mention of the 122 brought back my own memories of when I saw one of these first while at the Marconi School of Wireless for army personnel then being conducted in a building above Broadway Motors in Sydney. The sets we saw there were also in mint condition, and were there for **show only** while instructors tried to explain how they worked. How were we supposed to know all about these sets while being forbidden to use them is one of the mysteries of World War Two. Anyway, relying on my memory of this set, with nearly half a century having passed since I saw one, according to Mike, my description of the set, was correct in every detail, even to the color-coding system of the locknuts on the two dials — all of which goes to show that my memory is not too bad even after all the things that have happened to me over these past years. **AR**

QSP

PRIME MINISTER IS AN AMATEUR

Rajiv Gandhi VU2RG became Prime Minister of India in the evening of 31st October 1984

Rajiv passed the 1st Grade amateur examination in 1974 and was allotted the call sign VU2RG on the 1st January 1975. Since this time he has remained active generally on 21/28 MHz but over the past two years, has been active on 144-146 MHz also.

During and after school days Rajiv's interests were aviation and electronics, he became a keen home-brewer in electronics after witnessing amateur radio in action at the home of his uncle. Within three months of obtaining his call sign he made his first homebrew HF CW/SSB transceiver and a two element quad antenna which he used until 1980 making many contacts.

From the time Rajiv became a Member of Parliament in June 1981 he has constantly been working for progressive developments in aviation and electronics, including amateur radio, in India. Due to his constant efforts computer training is available in Indian schools and several relaxations have been given to the electronic trade/industry which benefit the masses.

In amateur activity Rajiv has taken up the cause of amateurs individually and collectively and organised fast amateur participation to maintain communications during a cyclone/flood on the west coast of India at a time when all known channels of civil communications had failed. He also persuaded the Government of India to consider a request from the Amateur Radio Society of India to allow custom duty free import of amateur equipment. Such facilities will be available to Indian amateurs until 31st March 1985.

In 1975 Rajiv's XYL Sonia passed the 1st Grade amateur examination and was allotted the call sign VU2SON. She is also active on 21, 28 and 144-146 MHz.

During early 1985 it is hoped their son Rahul (14) and daughter Priyanka (12) will have call signs and be 'on the air'.

Rajiv is a very avid reader of amateur radio literature and journals and is always endeavouring to keep abreast of the latest developments and modern techniques. In July 1984 he was granted permission to install a 'close repeater' on 144-146 MHz with the call sign VU2RRG. The equipment for this repeater is still awaited from abroad but when installed it will be the first amateur repeater station in India.

from material submitted by Amar Banerjee VU2CZ.

AR

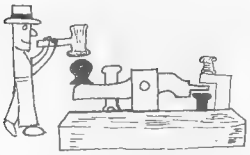
WANTED!!

A letter has been received from Leopold Giesel with a request for an Australian penfriend.

One of Leopold's hobbies is collecting postage stamps.

Anyone interested should write to Leopold at DDR 9472, Schneeberg, Chuhlberggasse 11.

AR



POUNDING BRASS

Marshall Emm, VK5FN
GPO Box 389, Adelaide, SA 5001

SIGNAL REPORT AMPLIFICATION

Last month we talked about Signal Reporting in terms of the basic Readability/Strength/Tone report. Sometimes there are factors which need to be reported, but simply cannot be considered as matters of readability, strength or tone.

(By the way, if this sounds familiar, it is largely a reprint of a column which appeared about two years ago. It is being repeated for the benefit of newcomers who keep asking me to write about basic CW operations. The great advantage of a word-processor is that chunks of earlier columns can be inserted wherever desired, in the midst of new material. This time, however, the entire column has come across virtually unaltered, so I thought I should explain why it might seem familiar.)

Even when an extremely strong (S9) signal is perfectly readable (R5) it can still have technical attributes which may (or should) be of interest to the other operator. There are a number of one-letter signal report amplifications for this purpose, advised in standard format. They don't take up much space, but convey a lot of information. Typical reports might be 5/9/9X, 5/9C or 3/7 QRN3. The amplification symbols which should be at every op's fingertips are described below.

X Fortunately, most signals could be reported as -/-/9X, for their tone is pure and their frequency is stable. If received signals do not vary in pitch, meaning there is no variation in transmitting frequency, then X can be used to indicate that the signal is as stable as a crystal — (Xtal!) controlled one.

C The symbol C represents "chirp," and is used to describe the sound of a signal in which each character element (dit or dah) changes in pitch in a repetitive fashion. If you hear a CQ which sounds like "cheow-chi-cheow-chi, cheow-cheow-chi-cheow," you are hearing "chirp." The problem is usually caused by an unstable VFO or oscillator which gets drawn off frequency each time it comes under load. Most commercial gear is chirp-free, but you can often hear chirpy signals coming from the USSR, where a lot of gear is home-brewed by members of the Ham Gear Collective of the Lenin Institute of Tractor Repair and Plumbing Radio Sport Club. A stable oscillator with adequate buffering between it and the keyed stage should solve the problem, but is not always possible, particularly in QRP work. When you hear it — report it. The other op may not be aware of it and it may be something he can fix easily if someone tells him it's there.

D Sometimes a signal will drift in frequency (the pitch gradually rises or falls), in which case the symbol D is used. This is often a problem where a VFO or oscillator is subject to temperature changes such as the rig heating up as a transmission progresses. I once heard an op in a contest who sounded like a sports-car going up a steep hill. Each time he transmitted he started zero-beat, then took off for the wild blue yonder, sometimes dropping down a bit between words before taking off again. Most drift is more gentle, and of course you should be sure it is not your receiver which is drifting before you send D. Experience is the best teacher in this regard, but as a general rule, it is probably best to ignore a small amount of drift, especially if you only notice it five minutes into the QSO.

K Key clicks (K) can be a real problem because they are spurious transmissions which may appear quite some distance from the QSO frequency. They are a clicking, static-y noise which occurs in time with someone's sending. They often result from overdriving the transmitter, so it is a good practice to refrain from running flat-out. Just backing off a little bit from full power can make the world of difference.

Interference, in contrast with technical faults, can be either man-made or natural (QRM or QRN, respectively). The basic principle in reporting QRM/QRN is that if it is causing no problems in copying, don't report it. Just because you can hear it doesn't mean it is causing interference, and you should think in terms of readability. A report of 5/9 QRM, for example, means "your signal is perfectly readable with no difficulty, and the difficulty is caused by man-made interference (!)."

The main reason for reporting QRM or QRN is so the other station can adjust his sending to suit. Accordingly, the QRM or QRN should be followed by a number from 1 to 5, representing the degree of interference. For example, if you send a report 3/7 QRN 3, the other operator knows you have noisy conditions and will (theoretically) slow down and/or repeat key words. For that matter, there is nothing to stop you from sending —
"RST 3 7 9 QRM 3 ? RST 3 7 9 QRM 3 PSE QRS 10 ES QSZ 2 QSZ 2" — which translates as "your readability is 3, your strength 7, and your tone 9, with man-made interference causing significant but not overwhelming problems, please slow down to 10 WPM and send everything twice." Your chances of copying his next transmission are a lot better than if you had sent "RST 3 7 9 QRM."

If the strength report is high, but the readability is less than 5, some amplification really should be given.

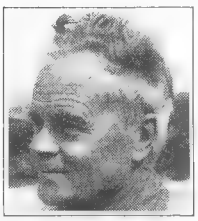
One last aspect of reporting deserves comment, and that is the tendency for award and certificate managers to demand "minimum reports." To my mind this is about as silly as you can get, especially when some lid keeps you from qualifying for something by giving you a 5/0/9 report. I personally do not chase paper, at least not much, but I would have to rule out anything requiring minimum reports. After all, the purpose of it all is communications, and there have been many occasions where a 3/2/9 report has meant more to me than other QSO's where I was "given" 5/9/9 PLUS 40 dB. If you have exchanged calls, reports, and names you have certainly communicated, and there is much more virtue in having done it under difficult conditions. What do you think?

Keep communicating . . . ES CUL

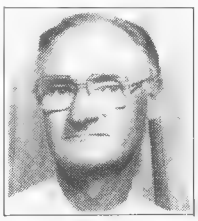
AR

AMATEUR RADIO MAGAZINE AWARDS

Tony VK3QQ



Reg VK2ELG



Rob VK5RG.

The awards for 1984, which are selected by the Publications Committee are as follows:

The Higginbotham Award for service to amateur radio was awarded to Tony Tregale VK3QQ for his dedication to the subject of EMC.

The Alan Shawsmith Journalistic Award was awarded to Reg Glanville VK2ELG for his excellent article "Clandestine SWLing".

Technical Award — which is awarded for the best technical article published in Amateur Radio went to Rob Gurr VK5RG for Rob's Wire Antennas article.

Congratulations and best wishes to all three winners.

AR

Further to . . .

A recent photograph of Roy Jonasson VK4NE who was featured in Thumbnail Sketches page 4, January AR.

Photo courtesy Alan Shawsmith VK4SS.

EDUCATION NOTES

Brenda Edmonds, VK3KT
FEDERAL EDUCATION OFFICER
56 Baden Powell Drive, Frankston, Vic 3199

I have been asked at times for advice about organising and running classes.

There are no set rules or procedures, so I can only offer some ideas from our own experience and comments collected from other instructors or students.

There are so many variations between classes — level required, numbers and backgrounds of students time available, physical location and facilities, and lecturers available — that each class is different, but there are a few considerations that apply to all.

FIRSTLY — THE COURSE TO USE

Stick to the published syllabus, but be aware that there is a tendency to a change of emphasis as technology develops. When modifications to the syllabus are made, they will be publicised.

THE CLASS

From our experience the one factor most responsible for success of a class is the enthusiasm and dedication of the students themselves. If they are aware that the two or three hours of lectures each week must be backed up with several hours of homework, and are prepared to spend this time on it, their chances of success will be good, and the class will be stimulating and rewarding for all concerned.

Numbers may be limited by the facilities available or by lack of publicity. Notices placed in local shop windows frequently collect new students. There is no minimum number, but more than about 30 is getting too big even in standard classroom conditions. My personal preference is for about 12-20, but remember that there may be a drop-out rate of 10-30 percent of starters. A small group ensures that members are able to ask questions or request repetition without feeling that they are wasting everyone's time.

LOCATION AND FACILITIES

These depend on what is available and the class size. Three or four students can be seated around one table with the instructor — but unless the instructor can write upside down, a better arrangement is to have a lecture type situation, with the assistance of some sort of chalk board or overhead projector. Inexperienced lecturers may need to practise writing so that it can be read from some metres distance.

The instructor may be covering the whole course or just one topic, depending on the people available and their competence/confidence. Ideally, the lecturer should be competent to deal with any likely questions from the class (and there are usually a few curly ones) but more importantly must be able to appreciate the difficulties and limitations of the students. Too often the 'expert' is unable to explain his specialities in the simple language needed by the newcomer. (This complaint is by no means restricted to amateur radio.) This problem is compounded by the different levels at which students may be starting. It is worth spending some time sorting out the backgrounds of the students, and, if necessary, putting in a few extra sessions with those who need, for example, some maths revision.

THE LENGTH OF THE COURSE

Can be varied to some extent. We have found that about eight months of two hours per week adequately covers the Novice syllabus.

Do not try to cram too much into one session. The new science graduate will cope, but the middle-aged truckdriver will become bogged down and lose interest. A break every hour is essential for both students and instructor — preferably with tea or coffee facilities to encourage movement and interaction.

FINALLY, QUESTIONS AND EXAM TECHNIQUE

Most students will need practice in reading and answering multi-choice questions. This should begin early in the course — perhaps a few questions on the previous week's topic before starting the next. Questions can also be set for homework, but I think new questions tackled under exam conditions and against the clock are better practice. A full scale one hour exam on the work covered so far can be given two or three times during the course, with a full scale trial exam at the end. In each case, check the questions where most failures occur, and use this as the basis for revision sessions.

I would be interested to hear other peoples' ideas on classes, either by mail or on the Education Net (Thursday 1030 UTC near the top end of the Novice band on 80 metres or 1130 UTC at about 3.685 MHz).

Best wishes to all who are getting involved with classes for the first time this year, and best of luck to those preparing for the February exams.

73 Brenda VK3KT

AR

ALARA

Australian Ladies Amateur Radio Association

Margaret Loft, VK3DML
28 Lawrence Street, Castlemaine, Vic 3450

This report is coming to you from a caravan park at Portland. George and I will be here for 2 weeks until mid January.

We are looking forward to some nice sunny calm weather to enjoy all the area has to offer.

The contest results will be in the next months comumn sorry to say but we left home before the deadline. Up to date 40 logs have been received — more from OMs this time and it is very pleasing to have the response from the men folk. Thank you for taking the time to encourage the YLs and we do look forward to having you join in again next November, for No 5.

Some comments I received with the logs, *we were disappointed in lack of ALARA members on CW.* Come on girls, it's not too hard, so start practising for this years contest.

The certificate for the Mrs McKenzie CW section of the contest is making slow progress but hopefully will be on its way to the lucky YL very soon now. She will have been notified prior to this article.

SUBSCRIPTIONS

Were due and payable by 31st December 1984. $5.00 for Australian members and also for overseas with Newsletter going air mail. $3.00 if sent by sea mail.

Membership now is very close to 200 We have 4 new G-land YL's who have been sponsored into ALARA (call signs next month).

Good luck to all who are sitting exams again this month, do hope this is the lucky one for you. If not, well keep trying. It really is worth it in the end.

VK3 State Co-ordinator — Bron VK3NDT/XTD has very kindly volunteered to be our VK3 state representative. Marilyn VK3DMS was trying to wear 3 hats at once and asked for a volunteer in the Melbourne area. So many thanks Bron for the offer and we hope you enjoy your new job and welcome to the committee of ALARA.

Good to catch up with you at Echuca in December too Bron, always nice to say hello in person.

Thank you also to Marilyn for your time as State Representative — and hope this has eased the load somewhat. It is better to share the load around, all the more the merrier.

While I am saying thank you — a very special thank you to all associated with AR. It was a lovely surprise for me when I found the page of Mildura photos in December AR.

My little contribution is always well presented and the photos do add a lot of interest. Still have quite a few to be printed this year, so if you have one of some YL who hasn't appeared I'll use it then return to you if wanted.

ALARA by now has stickers printed for use on QSL cards, stationery etc, these will be for sale. Price on application (until I can get them from Valda and they appear in AR) to Valda VK3DVT, PO Box 4, Brighton Vic 3186.

Also still available are charms, badges and teaspoons all with ALARA logo depicted.

1985 is ALARA's tenth year and we are hoping to celebrate in some way. Possibly in each State a lunch or afternoon tea will be held. A pity our get-together in Mildura did not co-incide with this year but we will be holding national get-togethers at intervals A poll has been organised in the Newsletter and no results as yet.

Until next month 73/33/88. Margaret VK3DML

AR

MAX LOVELESS MEMORIAL COLLECTION

This collection of valve era communications equipment was briefly outlined in the August 1984 AR.

Barry Riseley, the collection co-ordinator has advised us that the collection is now definitely underway and has begun to get together some really fine examples of valve era equipment.

Hopefully as the collection becomes more organised and developed it will be possible to run some pictorial articles, which judging from the correspondence Barry has received arising out of the initial article would be of considerable interest to many WIA members.

At the moment the collection is anxious to obtain "Ham Band" crystals in the old FT243 and/or RAAF "D" type holders. These ARE URGENTLY REQUIRED to enable some of the old gear to be reliably operated on air and if you have old "Ham Band" crystals or empty holders or any frequency crystals in older type holders that are outside ordinary amateur bands then they could be put to good use by the Loveless Collection.

We are also most anxious to get hold of some old type plug-in coil formers with 4, 5 or 6 pin bases, as marketed by Marquis, RCS, Jabel and probably others over the years.

Another item required is a "plate" modulation transformer suitable for use in a small "demonstration" AM transmitter of say 38-50 watts or thereabouts.

MOST IMPORTANT PLEASE — before your toss out your old junk valves, components, books, magazines, etc. give the Max Loveless Pioneer Memorial people an opportunity to take it off your hands. Your assistance will help ensure that at least part of our communications heritage is preserved for posterity.

Should you feel able to assist us in this most worthwhile venture please contact VK7KAD by telephone in Hobart (002) 28 6351 BH or (002) 43 7504 AH or perhaps write to GPO Box 215C, Hobart. Collection anywhere in Australia could be arranged.

AR

SPOTLIGHT ON SWLing

Robin Harwood, VK7RH
5 Helen Street, Launceston, Tas 7250

Most of the monitoring I do these days is of Utility or Non-broadcasting services. These stations extensively use HF to conduct their everyday communications and are specifically designed for the broadcast listener. The majority of these services can be found between the various international allocations assigned for broadcasting stations, although with the crowded spectrum, they have been known to increasingly utilize both exclusive broadcasting and amateur allocations.

One indispensable aid to the Utility DXer/Monitor is the Confidential Frequency List published by Gilfer Associates Inc. This contains an extensive listing of Utility Services from monitoring by the author, Oliver Ferrell, aided by reports submitted from fellow enthusiasts from throughout the world. All utes above 4 MHz are listed in frequency order. Because of the number of service employing RTTY, a separate guide was published dealing with RTTY services.

It was the wish of "Perry" Ferrell that these two lists be combined in one volume, and to this end, he set out to compile and update material for the sixth edition of the Confidential Frequency List. Tragically, in April of last year, "Perry" was killed in an automobile accident before the basic research and checking had been completed. Several well-known communications monitors stepped in, working in close co-operation to complete the Sixth Edition out of regard for "Perry" and also to see the CFL continue as a viable information and data source for other enthusiasts.

I recently obtained my copy of the CFL Sixth Edition through one of the DX Clubs in Australia. This volume contains the listing of Utility stations by frequency order from monitoring observations. Another aid is the inclusion of some international broadcasting stations transmitting on allocated frequencies normally reserved for utility services, although in some instances the location and/or identity of these is incorrect. However, it serves as a propagational indicator to have some of these listed.

The volume also has background articles on the various modes employed by utes such as Piccolo, AMTOR, RTTY both standard and non-standard, non-synchronous formats. Also an article was reprinted from the RTTY Guide on deciphering Russian language shifts.

I have found that the listings are fairly up to date, although it can readily be appreciated that there are considerable alterations made by utility services on a more frequent basis than the international broadcasting stations. It is to be anticipated that the CFL will continue in the future with further updates from monitoring. I myself do regularly update the information by scanning the Utility trails from DX magazines such as ADXN or DX Post, both of whom have a very good utility section.

Another Utility Guide has been edited by Joerg Klingenfuss. This Guide contains 27 pages of addresses of Utility Stations world-wide. But a word of warning: it is an offence in the majority of countries to reveal or divulge the contents of any traffic passed by any non-broadcasting transmissions including within Australia. So if you do wish to forward reports to these services, please confine your details to Callsign(s) Date, Time, Frequency etc. However, as the majority of utility stations are not interested in receiving or obtaining reports, or to know that for that matter, unauthorized persons are monitoring their transmissions, I would strongly recommend that you desist from forwarding them reports, confining your activity to sending reports to amateur or broadcasting services.

Both of these guides are extremely helpful to the identification of Utility Services together with their approximate location, especially in my IW monitoring. As well, GFS Electronics have, I believe, several utility guides available. The addresses for these Guides are as follows:

CFL*6 Gilfer Associates INC, PO Box 239, Park Ridge NJ 07656 USA.	Guide to Utility Stations Joerg Klingenfuss, Panoramastrasse 81, Hagelloch D-7400 Tuebingen Federal Republic of Germany.

On the 15th of December last year, as part of a five hour Talk Show over the giant ABC Network in the USA, there was a phone-in devoted to shortwave listening. Participating in it were Arthur Cushen, Glenn Hauser as well as other well-known DXers, all publicizing the hobby. However, the programme was scheduled from midnight and 5 am local time, when the majority of the listening audiences would be insomniacs or night shift workers. However, it is perhaps a concept that the WIA could put into practice to publicize amateur radio, and the 75th Anniversary of the Institute in particular, as there are plenty of similar programmes on our domestic stations in Australia.

Radio Australia's programme "Australia Tonight" hosted by Barry Seeber was voted by the SPEEDX Club of North America as the most popular SW programme by its members. Barry was also in equal top position as personality of the year with Clayton Howard of Radio HCJB, who is now retired. RA's popular programme devoted to SW listening, continues to be popular. As part of their recent first anniversary programme, they conducted an experimental slow-scan TV transmission and pictures were received in many parts of the world.

You may remember that last year, the BBC conducted a competition amongst their listeners to pick out the Seven Wonders of the Modern World. Hundreds of listeners sent in their suggestions and these will be considered by a panel of judges who will decide which are the Seven Wonders of the Modern World. Paddy Feeny will chair the discussion as well as present the series of eight programmes devoted to finding out as from the 12th of February at 0730 UTC in the BBC World Service.

While we are with the BBC World Service, there will be a series of programmes devoted to two Giants of Music, Georg Friedrich Handel and Johann Sebastian Bach, both being born 300 years ago exactly. There will be a series of concerts and documentaries celebrating the tercentenary. During February, Handel will be featured, while Bach will be featured later in the year.

Drama of the Month on the BBC W/S will be Robert Bolt's play "A Man For All Seasons", telling of the story of Sir Thomas More and Henry the VIII and of the struggle between the two, leading up to More's execution on the scaffold in 1535. I seemingly recollect hearing this not so long ago, but it is worth hearing it again.

For those lucky owners of a Racal receiver, regarded as the cream of professional receivers by many, there is now a non-profit organization with the aim of providing a mutual service to owners of surplus RACAL equipment. Known simply as the RACAL User Group, they issue a quarterly newsletter to keep the owners informed. Further details can be obtained from Peter Barker G8BBZ, 8A Alwynne Place, London N1 2NL, England.

Well, that is all for this month. Until next time, the best of 73 and good monitoring! — Robin VK7RH.

AR

INTRUDER WATCH

Bill Martin, VK2COP
FEDERAL INTRUDER WATCH CO-ORDINATOR
33 Somerville Road, Hornsby Heights, NSW 2077

You will have noticed by now that I have changed my call-sign to that appearing at the top of the column. I have not changed QTH, however, and any enquiries can still be directed via my call-book address, listed under my old call, VK2EBM.

Another change to report, this one unfortunate, is that we have lost our IW Co-ordinator for VK1, as he has moved into VK2. I won't make any comment as to whether that was a good move or a bad move! Grahame VK1GP, has been with us quite a while, and will be hard to replace. Thanks, Grahame, for your assistance with the IW in the VK1 area.

Good news from ZL1BAD, is that he has had a reply to his letter to the "Office des Postes et Telecommunications, Polynesie Francaise". Bob wrote to them, after having amassed quite a deal of information through the Intruder Watch, on carrier and telephone activity spilling over onto the lower end of the 40 metre band. These transmissions have been heard daily for months, and the French Polynesian Office in Papeete has written to say that they have moved frequency from 6.999 MHz, and, hopefully, they will no longer interfere with this section of the band, which had been successfully wiping out from about 7.0 MHz to about 7.006 MHz. Many thanks to those observers who took the time to report this particular intruder.

In an interview in CQ Magazine, July 1984, Dr Robert S Powers, Jr, Chief Scientist of the Office of Science and Technology, FCC, was asked by the magazine to comment on some aspects of the 'Woodpecker'. As early as 1976, the USA Administration sent telegraphic messages to the USSR re the Woodpecker, and received no reply. (*Sound familiar?*). They then went to the IFRB, who also complained in writing; the USSR replied that "*the operations involved were experimental-; that they would cause interference of short duration-; and that action was being taken to decrease the incidence of interference.*" (*HI*) . . . The important thing that comes to our attention as a result of this interview, is that Dr Powers has said that the Department is maintaining a file of complaints which can be drawn upon for negotiating purposes when the appropriate occasion arises. This means to me that we should continue to report intrusions into the amateur bands by the Woodpecker, for the information of the USA Administration.

So let's hear from you on all intruders, and keep the reports on the Woodpecker coming.

See you next month.

AR

AMSAT AUSTRALIA

Colin Hurst VK5HI
8 Arndell Road, Salisbury Park, SA 5109

NATIONAL CO-ORDINATOR
Graham Ratcliff VK5AGR

INFORMATION NETS
AMSAT AUSTRALIA
Control: VK5AGR
Amateur Checkin: 0945 UTC Sunday
Bulletin Commences: 1000 UTC
Winter: 3.680 MHz Summer: 7.064 MHz
AMSAT PACIFIC
Control: JA1ANG
1100 UTC Sunday
14.305 MHz

AMSAT SW PACIFIC
Control: W6CG
2200 UTC Saturday
21.280/28.878 MHz

Participating stations and listeners are able to obtain basic orbital data including Keplerian elements from the AMSAT Australia net. This information is also included in some WIA Divisional Broadcasts.

ACKNOWLEDGEMENTS
The only contribution this month is from Bob VK3ZBB, to whom I am greatly indebted for his monthly Ups and Downs listing.

OSCAR 10 APOGEES
A careful survey of the Oscar 10 Apogees listed this month highlights the significance of things to come, a look at both orbits of the day. Refer to Sydney and Perth Apogees around the 12th, 13th and 14th February. At this time the prospect is insignificant, time-wise, however as the apogee drifts slowly southwards total hours of operation through Oscar-10 will be extended over those currently enjoyed.

OSCAR-10 APOGEES — FEBRUARY 1985

			APOGEE	SATELLITE CO-ORDINATES		BEAM HEADINGS SYDNEY		ADELAIDE		PERTH	
DATE	DAY #	ORBIT #	UTC HHMM:SS	LAT DEG	LONG DEG	AZ DEG	EL DEG	AZ DEG	EL DEG	AZ DEG	EL DEG
Feb 1	32	1232	0603:00	7	261	299	18	310	27	335	42
2	33	1234	0522:05	7	251	307	25	320	33	349	45
3	34	1236	0441:10	6	242	316	31	331	37	3	45
4	35	1238	0400:15	6	233	326	37	343	41	18	44
5	36	1240	0319:20	6	223	338	41	357	43	31	40
6	37	1242	0238.25	6	214	352	43	11	42	43	35
7	38	1244	0157 30	6	205	7	44	25	39	52	29
8	39	1246	0116.35	6	195	21	42	37	35	60	22
9	40	1248	0035·40	6	186	33	38	47	30	67	14
9	40	1250	2354.45	6	176	44	33	56	23	73	7
10	41	1252	2313:50	6	167	53	26	63	17	78	-1
11	42	1254	2232.55	5	158	61	20	70	9		
12	43	1256	2152:00	5	148	68	12	76	2		
13	44	1257	0931:33	5	324					280	-5
13	44	1258	2111:05	5	139	74	5				
14	45	1259	0850:37	5	314					285	-3
14	45	1260	2030 10	5	130	80	-5				
15	46	1261	0809:42	5	305					291	13
16	47	1263	0728:47	5	296			283	1	297	21
17	48	1265	0647:52	5	286	281	-1	289	9	305	28
18	49	1267	0606:57	5	277	287	7	295	16	314	35
19	50	1269	0526·02	5	268	293	14	303	23	324	41
20	51	1271	0445·07	4	258	299	22	311	30	337	45
21	52	1273	0404 12	4	249	307	29	321	36	352	47
22	53	1275	0323 17	4	239	317	35	333	41	8	48
23	54	1277	0242.22	4	230	328	40	346	44	23	45
24	55	1279	0201 27	4	221	341	44	1	45	36	41
25	56	1281	0120 32	4	211	356	46	16	44	47	35
26	57	1283	0039 37	4	202	11	46	29	41	56	29
26	57	1285	2358 42	4	193	25	43	41	36	64	21
27	58	1287	2317:47	4	183	38	39	51	30	70	14
28	59	1289	2236:52	3	174	48	33	59	23	76	6
Mar 1	60	1291	2155:57	3	165	57	26	67	16	82	-2
2	61	1293	2115:02	3	155	65	19	73	9		
3	62	1295	2034·07	3	146	71	12	79	1		
4	63	1296	0813:39	3	321					280	1
4	63	1297	1953 12	3	137	77	4				
5	64	1298	0732:44	3	312					285	8
6	65	1300	0651 49	3	302					291	16
7	66	1302	0610.54	3	293			283	5	297	24
8	67	1304	0529 59	3	284	281	2	289	12	305	32
9	68	1306	0449:04	2	274	286	10	295	20	314	38
10	69	1308	0408 09	2	265	292	18	303	27	326	44
11	70	1310	0327 14	2	256	299	25	312	34	340	48
12	71	1312	0246 19	2	246	308	32	322	40	356	50
13	72	1314	0205 24	2	237	318	39	335	44	13	50
14	73	1316	0124:29	2	228	330	44	350	47	28	47

SATELLITE ACTIVITY FOR PERIOD 22 SEPTEMBER TO 31 OCTOBER 1984

1 Launches

NUMBER	NAME	NATION	DATE OF LAUNCH	INITIAL DATA PERIOD MINS	APOGEE KM	PERIGEE KM	INCLN DEG	REMARKS
1984-102A	COSMOS 1599	USSR	25th Sep	88.7	275	179	67.2	SI TM
1984-103A	COSMOS 1600	USSR	27th Sep	90.4	404	215	70	SI TM
1984-104A	COSMOS 1601	USSR	27th Sep	94.5	521	477	65.8	SI TM
1984-105A	COSMOS 1602	USSR	28th Sep	97.8	680	648	82.5	SI TM
1984-106A	COSMOS 1603	USSR	28th Sep	102.2	877	852	71.2	SI TM
1984-107A	COSMOS 1604	USSR	4th Oct	709	39342	613	62 8	SI TM
1984-108A	STS 41G	USA	5th Oct	88.9	229	216	57.0	Manned flight*
1984-108B	ERBS	USA	5th Oct	92 9	421	408	57.0	From STS 41G
1984-109A	COSMOS 1605	USSR	11tn Oct	104.9	1031	969	82.9	SI TM
1984-110A	NOVA III	USA	12th Oct	98 1	541.5	180	90	Navigation
1984-111A	COSMOS 1606	USSR	18th Oct	97.7	678	649	82.5	SI TM
1984-112A	COSMOS 1607	USSR	31st Oct	89.6	280	256	65	SI TM

SI TM Scientific Instruments & Telemetry.
** Carrying Astronauts R Crippen, J McBride, S Ride, K Sullivan, D Leestma, P Scully-Power, and M Garneau.*

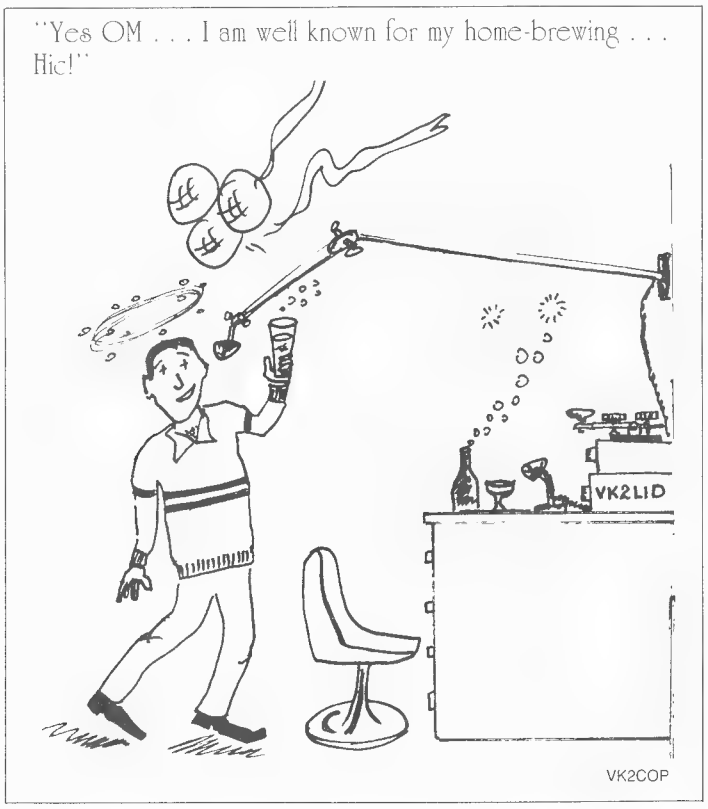
2 RETURNS

The following satellites returned or decayed during the period:

1984-032A	SOYUZ T-11	2 Oct
1984-065A	USA-2	18 Oct
1984-103A	COSMOS 1600	11 Oct
1984-108A	STS 41G	13 Oct

Together with thirty-two other objects

de Colin VK5HI



HELP

A WAYWARD TROPHY FIND ITS WAY HOME

The VK Novice Trophy has slipped away whilst no one was looking and has now got itself lost. The where-abouts of this trophy were last known in 1982. Anyone who may be able to assist please contact the Federal Office on telephone (03) 528 5962 or write to the Federal Secretary at PO Box 300, Caulfield South, Vic., 3162.

AWARDS

VICTORIAN NATIONAL PARK ACTIVITY WEEKEND — 9-11 MARCH 1985

A former Victorian Division President, Keith Roget, originally suggested an award to encourage amateur radio activity from Victoria's National Parks. In the early 1970s a number of radio amateurs activated Victoria's National Parks and the award was popular.

Following the untimely death of Keith Roget, the WIA Victorian Division Council was given permission by his widow to re-name the award in his memory. In 1984 the award was revised to reflect the increase in National Parks and the first and only recipient of this award in 1984 was Ralph VK3BRF.

As a special event to help celebrate Victoria's 150 years anniversary, the Victorian Division is asking Clubs and individual radio amateurs to support a National Park Activity weekend. This will be held over Victoria's Labour Day holiday long weekend, the 9th-11th March 1985. The purpose is to promote activity from Victoria's 31 National Parks and to promote the Keith Roget Memorial National Park Award. Clubs and individual radio amateurs are asked to operate from Victoria's National Parks to help shortwave listeners and fellow radio amateurs to make contact to and/or from a specified number of National Parks for the Award. For those living in VK3 call area this is 16 Parks. Award claimants in Papua New Guinea, New Zealand and VK call areas other than VK3 require 5 National Parks, while overseas (other than P29 and ZL) need only 2 parks.

A brief outline of the 31 National Parks in Victoria follows:

East Gippsland
Alfred — On Princes Highway between Cann River and Genoa.
Croajingolong — South of Princes Highway between Cann River and Genoa.
Glenaladale — 30 km north of Princes Highway from Fernbank
The Lakes — East of Loch Sport.
Lind — Off Princes Highway between Orbost and Cann River.
Snowy River — South of Mackillop Bridge
Tingaringy — North of Mackillop Bridge on the Buchan-Delegate Road.

West Gippsland
Baw Baw — Approach via Yarra Junction or Moe or Erica.
Bulga — Eastern end of Grand Ridge Road, near Balook
Morwell — 16 km south of Morwell. Approach via Jeeralong Junction and Junction Road
Tarra Valley — On Tarra Valley Road, 30 km from Yarram.
Wilsons Promontory — Approach on South Gippsland Highway via Meeniyan or Foster
Wonnangatta-Moroka — Via Licola or Mansfield

North East Victoria
Bogong — Via Ovens Valley Highway to Harrietville or Myrtleford, or via Omeo on Alpine Tourist Road
Burrowa-Pine Mountain — North West of Corryong Approach from Cudgewa or Walwa.
Fraser — On the western shores of Lake Eildon 17 km from Alexandra.
Mt Buffalo — 30 km from Porepunkah

North West Victoria
Grampians — Via Stawell, or Horsham, or Hamilton
Hattah-Kulkyne — 36 km north of Hattah township.
Little Desert — South of Western Highway between Dimboola and Nhill
Wyperfeld — 50 km north of Rainbow

South West Victoria
Lower Glenelg — North of Portland-Nelson Road, along the Glenelg River
Mt Eccles — 9 km west of Macarthur which is 33 km south of Hamilton
Mt Richmond — 32 km west of Portland.
Otway — Via Great Ocean Road, or Princes Highway to Apollo Bay
Port Campbell — South of Great Ocean Road between Princetown and Port Campbell

Metropolitan
Brisbane Ranges — Off Anakie-Ballan or Anakie-Marsh Roads
Churchill — Rowville, off Stud Road near Wellington Road north of Dandenong.
Fern Tree Gully — Just north of Upper Fern Tree Gully.
Kinglake — West of Kinglake township. Approach from Whittlesea or Yarra Glen
Organ Pipes — Off Calder Highway, 8 km past Keilor

Many of these parks are within easy range of 2 metre repeaters, and with plenty of trees and natural supports for field day type antennas, HF operation can be very rewarding. The Mildura Radio and Electronic Club members will be operating from the Hattah-Kulkyne National Park and you are asked to join them from any National Park and make this long weekend not only an enjoyable break in pleasant surroundings, but a rewarding one with plenty of National Park contacts for everyone.

Contributed by Peter Barclay VK3FR
National Parks Award Manager, WIA Vic Division.

AR

Radio Amateur Old Timers Club

Each year, two QSO parties are held for members of RAOTC Australia, and Old Timers' Club New Zealand.

Members are requested to cut out this notification and keep it before them as the days, times, and bands will remain fixed.

RULES

ELIGIBILITY — The parties/contests are open to members of RAOTC (Australia) and OTC (New Zealand).

Note — There are members of the Australian Club in overseas countries who could possibly participate at the times laid down.

CONTEST EXCHANGE — Members will exchange
1 Their Club membership number. VKs prefixed by "A", ZLs prefixed by "Z".
2 Year of first licence.
3 Name.
4 Age.
Eg Number A256 1951 Bill 49
Number Z128 1923 Harry 78

SCORING — One completed contact with a member on CW or SSB but not both, will score 5 points.

MULTIPLIER — the total of VK, ZL and Overseas call areas contacted

FINAL SCORE — Contact points times multiplier.

DATES, TIMES, AND BANDS

No 1 — Second Monday in March — 20 metres 0200 to 0500 UTC.

Please spread out around centre frequencies CW 14.050 and SSB 14.150 MHz

No 2 — Second Monday in August — 40 metres 0800 to 1100 UTC. Centre frequencies CW 7.035, SSB 7.100 MHz.

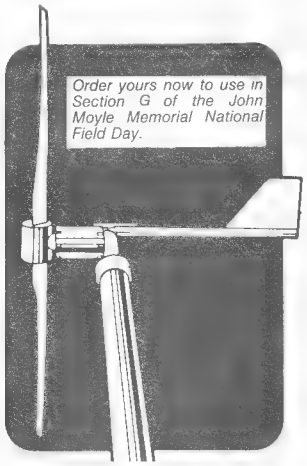
ENTRIES — Claimed scores showing mode (CW, SSB or CW/SSB), number of QSOs and multiplier should be forwarded to John Tutton VK3ZC, 11 Cooloongatta Road, Camberwell, Vic 3124

All amateurs who have been licensed for a period of 25 years or more are eligible to join the Radio Amateur Old Timers' Club. A self-addressed envelope (9 x 4) to the Secretary, Harry Cliff VK3HC, PO Box 50, Point Lonsdale, Vic 3225 will bring you a membership application form.

1985 Contests — 11th March and 12th August.

AR

RIKAN HORNET WINDTURBINE



Wind driven Battery Charger. Rated Output 20 watts at 20 knots. 6, 12 and 24 volts.

WECAM

(Props. B. M. & B. P. Stares)
11 Malmesbury Street, Wendouree 3355
Phone (053) 39 2808

CONTESTS

Ian Hunt VK5QX
FEDERAL CONTEST MANAGER

P.O. Box 1234, GPO, Adelaide, SA 5001.

CONTEST CALENDAR

FEBRUARY

9-10 QCWA CW QSO Party
9-10 YL — OM Phone Contest
16-17 ARRL DX CW Contest
23 RTTY World Championship Contest (Rules AR Jan 85)
22-24 CQ WW DX 160 metre SSB Contest (Rules AR DEC 84)
23-24 John Moyle Memorial National Field Day Contest (Rules this issue)

MARCH

9-10 Commonwealth Contest 1985 (Rules this issue)
10 WIA 75th Anniversary CW Contest (Rules this issue)
23-25 BARTG Spring RTTY Contest 1985 (Rules to appear March issue due to large volume of contest material for this issue)
30-31 CQ WW WPX SSB Contest

In this issue are provided the rules for the John Moyle Memorial National Field Day Contest. It might be suggested that you read these rules very carefully as they differ in many ways from previous rules laid down for the annual field day contest. Such changes as are embodied in the rules for this year are not necessarily radical and indeed merely reflect the implementation of some of the items which have been Federal policy of the WIA for quite some time. *Please look most carefully at the rules concerning QSO Points, Multipliers, Bonus Points and Repeat Contacts.*

You will note that there is now another category for home stations using emergency power. This means that such stations must be operated independently of power mains and serves to further the aims of the WIA to prepare operators for emergency situations.

I have also attempted to make things more interesting for VHF/UHF operators by introducing the multiplier system for varying distance contacts. I have also deliberately tried to deter stations from operating along the lines of working strings of overseas home stations, an approach which seems to be somewhat against the overall aims of the Field Day contest.

I have only recently received the rules for the British Amateur Radio Teleprinter Group (BARTG) Spring RTTY Contest, 1985. Just a little advance information so that you can make arrangements to have the necessary time made available for this contest. This contest will be held from 0200 UTC Saturday 23rd March until 0200 UTC Monday 25th March 1985. The total contest period is 48 hours but not more than 30 hours of operation is permitted. Time spent as listening periods counts as operating time. The 18 hours of non-operating time can be taken at any time during the contest period, but off periods may not be less than 3 hours at a time.

CERTIFICATES

I am still having quite some difficulty in catching up with the backlog of certificates to be issued for past contests. Final sorting out of the problems associated with certificates for the 1983 Remembrance Day Contest has yet to be reached. I sent out all the certificates for the 1983 VK Novice Contest only to find that none had been sent out for the 1982 VK Novice Contest. I also discover that no certificates were sent out for the 1984 Field Day Contest. If you are amongst those who have not yet received a certificate which you were entitled to please do not give up hope. Be patient.

Just a final word regarding the Field Day event this month. Might I modestly suggest that you review my comments regarding Field Day operations which appeared in this column in the November issue of Amateur Radio. I will look forward to working you in this contest and hope that there will be plenty of activity.

1983 VK NOVICE CONTEST

Photograph by Ken McLachlan VK3AH

Pictured is David McAulay, VK3EW, (now updated from VK3KHI), receiving his Certificate for this event from Jim Linton, VK3PC, the Victorian Division President.

David should have also held for 12 months the Novice Trophy, as he scored 1652 points thereby being the overall winner, but unfortunately, as readers are aware, we are currently having difficulties locating this trophy.

JOHN MOYLE MEMORIAL NATIONAL FIELD DAY CONTEST 1985

Contest Period: From 0100 UTC 23rd February 85 to 0700 UTC 24th February 85.

Object: To encourage portable operation on the amateur bands by Australian operators. This form of activity is intended to help operators become familiar with portable operation and thus assist in training them for preparedness in emergency situations.

Call Area Definition: (a) Within one's own call area. VK1 to VK1 etc. (b) Outside one's call area VK1 to VK2. VK1 to ZL etc.

RULES:

1 Divisions: There will be TWO divisions. (a) 24 Hour. (b) 6 Hour. In each division the operating period must be continuous within the time period allocated for the contest.

2 Sections: In each division there will be separate sections as follows:

(a) Portable field station, transmitting phone, single operator.
(b) Portable field station, transmitting CW, single operator.
(c) Portable field station, transmitting open, single operator.
(d) Portable field station, transmitting phone, multi-operator.
(e) Portable field station, transmitting CW, multi-operator.
(f) Portable field station, transmitting open, multi-operator.
(g) Home transmitting stations, emergency powered.
(h) Home transmitting stations, mains powered.
(i) Receiving stations.

3 Station Definition: A portable field station is one which operates from a power supply which is independent of any permanent installation. The power source must be fully portable, ie batteries, solar panels, wind or motor generators etc. A station located in an automobile and completely self contained, apart from antennas, is classed as being portable whether in motion or not.

4 Installation. No radio apparatus, including masts, antennas, feeder cables etc, may be erected on the site more than 24 hours before the contestant(s) begins operating.

5 Bands: All amateur bands may be used WITH THE EXCEPTION of the 10, 18 and 24 MHz HF bands.

6 Contacts: Cross band contacts are not permitted. Cross mode contacts are permissible, however they will count only as phone contacts for scoring purposes.

7 The size of any portable field station shall be restricted to approximately that of an 800 metrre diameter circle.

8 Multi-operator Stations: Such stations will provide a separate log for each band. Only one transmitter may be used on a given band at any one time, be it operating in a phone or CW mode. Only ONE callsign may be used from a multi-operator station.

9 Number Exchange: The exchange between stations will consist of a number/letter combination comprising the RS or RST report as applicable, followed by a serial number commencing with 001 and increasing by one for every contact. Should the number 999 be reached the series must then be re-commenced at 001. Following the serial number a letter must be added indicating the Section (a) through (h) in which the station is competing. eg Number sent by multi-operator station transmitting phone for the first contact would be 59001D.

10 Scoring

For Portable Field Stations. Contacts within Australia.

(a) Portable/Mobile outside entrants call area — 20 points.
(b) Portable/Mobile within entrants call area — 15 points.
(c) Home Stations/Section G outside entrants call area — 10 points.
(d) Home Stations/Section G within entrants call area — 5 points.
(e) Home Stations/Section H outside entrants call area — 2 points.
(f) Home Stations/Section H within entrants call area — 1 point.

Contacts outside Australia.

(g) Contacts with overseas stations, ie other than VK — 2 points.

For Home Stations/Emergency Powered. Contacts within Australia.

(a) Portable/Mobile outside entrants call area — 15 points.
(b) Portable/Mobile within entrants call area — 10 points.
(c) Home Stations/Section G irrespective of call area — 5 points.
(d) Home Stations/Section H irrespective of call area — 1 point.

For Home Stations/Mains Powered. Contacts within Australia.

(a) Portable/Mobile outside entrants call area — 10 points.
(b) Portable/Mobile within entrants call area — 5 points.
(c) Home Stations/Section G irrespective of call area — 1 point.

11 VHF/UHF Multipliers

For contacts made on frequencies from the 50 MHz band and upwards the QSO points score for each contact is multiplied as per the following table:

[illegible]	[illegible]
Under 50 kilometres	2
50 to 150 kilometres	5
150 to 300 kilometres	10
over 300 kilometres	20

12 Bonus Points

For any contact made using a 'Natural' Power Source a bonus score of 10 points may be added to the QSO points score. added A 'Natural' Power Source is regarded as one where power is derived from such as solar cells, wind, methane gas etc, as well as from batteries completely charged by 'natural' means. All power produced under this category must have been derived independently of

commercial mains or the use of petroleum derivatives.

13 CW Contacts CW to CW contacts earn double points. These points must be shown as claimed on the log sheet prior to the application of any multiplier or bonus points.

14 Repeat Contacts Portable Field Stations and Home Stations under Section G may contact other stations within these categories (Sections A to G) for repeat contacts provided that a period of at least 3 HOURS has elapsed since the last contact with the station concerned. Home stations operating under Section H may be contacted on a repeat basis provided that a period of at least 6 hours has elapsed. This applies for each band and mode.

15 Receiving Stations Stations in this section must record the serial number being sent by any of the stations operating in the contest within Sections (a) to (g) inclusive. QSO Points Scoring will be on the same basis as for Home Stations/ Section H as per Rule 10 above. VHF/UHF Multipliers and Bonus Points as indicated under rules 11 and 12 also apply.

16 Repeaters Operation through any active earth repeaters is not allowed for contest contact purposes, however, the use of such is allowable for the purposes of making contact arrangements. Contacts made using orbiting satellites or EME as a medium are acceptable.

17 Modes of Operation AM, FM and SSB all count as PHONE operation. RTTY and CW are regarded as being CW. It would not be expected that more exotic modes such as SSTV or Fast Scan TV would be used in this contest.

18 Log Format All logs shall be set out under the following headings and in the order shown. *Date, Time UTC, Callsign, Band, Mode, RST No Sent, RST No Received, QSO Points, Multiplier, Bonus Points, Total Points Claimed.* NB: The last three columns need only be shown where applicable. Contacts must be listed in order of time and serial number Each log page must also carry a progressive Total Points Score Claimed at the bottom of each sheet.

19 Summary Sheet A summary sheet must be included which indicates the following details: *For each contact to which a multiplier is applicable the serial number of the contact and also details of the respective station locations which apply to the contact. Such details must include either latitude/ longitude references for each station or some satisfactory proof, by such as map reference or distance calculation, as to the distance over which the QSO was conducted. For bonus points to be claimed suitable evidence must be provided as to the method of natural power generation employed. Such evidence could take the form of a photograph of the generating equipment used or a signed statement by another amateur showing his callsign declaring that he has inspected the generating equipment referred to.*

20 Front Sheet Each log must be accompanied by a FRONT COVER SHEET which provides the following information: *Name, Address, Callsign, Division, Section, Number of Contacts, Claimed Score.* This sheet must also indicate station location, equipment used, power generating system employed and in the case of MULTI-OPERATOR stations a list of operators names and callsigns together with their signatures. This front sheet must also carry a declaration signed by a licensed operator as follows: *DECLARATION: I hereby certify that this station was operated in accordance with the rules and spirit of the contest. Signed .....*
Date .....

21 Multiple Station Operation In the case of operators who have entered the contest in the *6 Hour Single Operator Section* it is allowable for them, upon their return to their home station, to make contacts with portable field stations. For this purpose they must submit a separate log which will be regarded as a Check Log only. ie they cannot enter into more than one section of the contest for competitive purposes. Operators who are interested in providing more field day activity are however encouraged to adopt this practice where possible.

22 Certificates Certificates will be awarded to the winner of each section in both the 6 and 24 hour divisions of the contest. The 6 hour certificates cannot be won by the 24 hour entrants. The Contest Manager also reserves the right to award other certificates where the effort made by a particular station is of special worthiness in his opinion.

23 Disqualification The general 'Contest Disqualification Criteria' as published on page 44 of the Amateur Radio for August 1984 apply to this contest. It is again pointed out that you should read the above rules properly so as to understand them and ensure that your log does comply with the contest rules laid down. See particularly rule numbers 18, 19 and 20.

24 Log Submission Logs should be forwarded to the Federal Contest Manager, Box 1234, GPO Adelaide, SA 5001. The front of the envelope containing the log should be marked 'John Moyle Memorial Field Day Contest'. Closing date for entries is 5th April 1985.

REMEMBRANCE DAY CONTEST 1984

CONGRATULATIONS TO VK2 DIVISION — WINNERS FOR 1984

The 1984 Remembrance Day Contest was won by the VK2 Division. Listed as part of the results below are various statistics for your interest together with totals of Divisional scores and a complete listing of individual scores by call area. The statistics will allow a comparison of operations in the contest for 1984 compared with the entries in the previous year, 1983. You may be able to draw some conclusions from such figures, however, I personally shudder at the thought of anybody suggesting any other schemes to make the contest more equitable. A great deal of work in the past has gone into solving this problem and those who have attempted such are very much to be admired. Nevertheless, should you have any useful comment to make I would be pleased to hear from you.

It will be noted that the number of logs submitted as against last year is down (by 60) making a percentage participation drop overall from 4.56 percent down to 3.9 percent. This to my mind seems to indicate that even though the Remembrance Day Contest is our main national contest each year it really does not receive the amount of support it deserves. You might also like to ponder this fact whilst looking at the state by state figures. One of the tables of interest is the number of logs per mode, Phone, CW or Open. This indicates very clearly that phone is the mode most favoured. It is interesting to note that whilst the number of operators using CW exclusively decreased significantly the number operating in the Open section, and thus employing both modes, did increase One wonders whether or not this backs the argument for double points for CW. Personally I do not accept that this is so as the CW operators in each contest are only competing one against the other, however, for the time being I will hold any further opinion on this and ask rather that you let me know what you think. Maybe some of the operators in the Open section could throw some light on this aspect

Many complaints were received about the mistakes in the rules. Apologies are proffered in this regard and I would again point out that I did my best to correct same. I would hope that this situation will not exist in the future. Very few stations submitted 'dupe' sheets as called for, however I have not penalised anyone for this. I believe that such are not necessary except perhaps for stations which submit larger logs In general stations submitting larger logs seem to do their best to provide a log of better than average quality thus showing some pride in their entry. There are always some exceptions and several logs have been disqualified. *Many* entrants did not seem to understand that Section (d) All modes, as shown in the rules, was in fact the Open Section in which one operates using a mixture of Phone and CW and that this section did not apply to an operator who simply used a transceiver which was capable of 'multimode' transmissions This rule will thus be made much clearer for the next contest. With regard to disqualified logs I would like to make it clear that such were only disqualified after consideration by a panel deliberating on an independent basis and that in almost all cases the decision was unanimous. It may seem significant that no logs from VK5 were in this category. I hasten to assure you that the VK5 logs received extra attention on this score.

I would hope that provided I can convince the Federal Authorities of the need to make a standard log sheet available for contest purposes the use of same together with a properly printed Summary and Front sheet will go a long way to solving many of the problems encountered with logs. Harking back to the 'dupe' sheet issue, it may even be possible to have suitable sheets for this purpose printed up although I would believe that you should be expected to do something for yourselves and the sheets as described in the December issue of this contest column are really not too difficult for you to produce.

As intimated in last issues column I have already learned a great deal about handling quantities of logs from my experience of this Remembrance Day Contest and have been able to realise some of the mistakes I have made this time. As a result I would hope in future to be able to present results somewhat sooner than on this occasion. Due to the fact that the Novice Contest follows right on the heels of the Remembrance Day contest the checking of logs and production of results have been held up too. I should have those results ready in time for the March issue of the magazine. I would also hope that in the not too distant future the dates for our Australian contests will be on a much more rational basis and that will also help to solve many of the problems encountered time wise.

For your interest here are some extracts from letters received with log entries.

'I have never entered any contest before . . . I'll do better next time.' 3DVW

'I would suggest that all concerned have an early consultation and make sure the rules are cleaned up well before next year.' 2RP

'Many stations did not observe 15 minutes silence at the beginning of the contest.' 1RM

'I almost did not enter this year as a protest over the way the RD has been messed about over the last few years . . . I may sound pedantic but I refuse to use the term "full call" anybody can be that if they have enough 807s under the belt. HI.' 3WW

'I enjoyed the contest thoroughly as it is the only contest I enter because my mum's husband was killed in action in WWII . . . My husband Adrian is VK2DZF es he deserves a special thanks for taking care of our kids, from 5-14 years, getting the meals etc, so I cud enter the contest hi!' 2ELF (2DZF is obviously a real gentleman – FCM)

'Because of declining activity . . bonus points for operation on say 21 to 30 MHz could be considered ' 2RJ

'Many thanks for a beaut contest.' 2BO

'You will note that there is no column provided to show the frequency band used . . . Several operators new to RD were confused about this point but I put them right.' 2AGF re sample log.

'Not to have to log RST as well as a number was also appreciated.' 5KEN

'I was most impressed with the good natured spirit of the contest ' 5ATN

'Enjoyed contest as always but condx on 15 m poor . . . 10 m hopeless as anticipated.' 4LT

'Things started OK, then at contact 018 the computer had a hardware failure (terminal), next the HF transceiver would not receive, finally traced to faulty relay. But luck was with me . . . ' 3VT. (He had a spare relay and backup dupe sheets FCM)

'I hope the sample logs dupe sheet material is not repeated again next year ' 3FR

'We noted that activity was considerably down on last years . . had a fine time just the same.' Wickham Amateur Radio Club. VK6

Now to list some of the many comments regarding the six hour rule. These are in proportion as received in favour and against.

'I own only VHF gear and in previous years have found the RD to be a hard but very satisfying contest. This year . . . found the contest still hard work but very satisfying, hence would like to see the one hour rule re-instated. 3BMV

' . . For these reasons we ask you to either return to one hour between contacts or reduce the time from 6 to 2 hours.' 3CNE North Eastern Radio Group.

'I didn't think I would enjoy the contest as a Z call with the new 6 hour rule and nearly didn't enter. I did however and enjoyed what there was of it but the interest and challenge is gone. The only reason I heard for the 6 hour rule was that the city operator had an unfair advantage. As it's a state (Division) contest I don't see the logic in this as all states have cities. I wonder how many Z calls enter the contest and reside in the bush?' 1ZAR

'I wish to protest in the strongest possible way to the restriction of VHF calls to 6 hourly . . . I reside 180 miles from Sydney. The new rule has reduced my score — and involvement — to insignificant proportions. If you wish to deter VHF operators just leave the rules the way they are.' 2ZZX

'If this method is continued I feel it will make the Remembrance Day contest a non event.' 5ZBC

'Given that it needs to be more than one hour, possibly even more than two hours but surely not as much as six hours.' 3YRP

'. . . predominantly a VHF station, the new rule virtually eliminated any prospects for anything other than a fairly boring contest.' 3CGH

'I could not help feeling during the weekend that the people we remembered on this day would have been totally opposed to any rule restricting the activities of some of our amateur friends who were unable to operate on DX bands. As a result many 'Z' calls were very conspicuous by their absence on the VHF bands . . . so next year could we have a less restrictive rule . . . even at one hour restriction I'm sure none of the VHF contestants gave any of the section winners any kind of fright.' 4BNL

'Limited Licencees and to only a slightly lesser extent full calls were vocal in their criticism of the "6 hour limit" for local VHF.' 5EA

The final word is given by Harry VK6WZ who indicates that he is a little bashful about my quoting from his letters, however I believe it is worth it.

'I missed out for 20 years 1958-1978 because of family and business commitments when I gave everything to do with amateur radio away, except the callsign and licence, but I'm "back in business" now and retired (contradiction?) and mean to go on supporting this great once-a-year event till my key becomes officially and permanently silent.'

COMPETITION RESULTS

The formula for the determination of results for each Division is:—

Total Points/Total Divisional Licences multiplied by weighting factor.

VK1	5456/ 315	x	1.48	25 63
VK2	14959/4652	x	11.91	38.29
VK3	15207/4431	x	8.21	28.18
VK4	9578/2439	x	7.55	29.65
VK5	24380/1709)	x	1.72	24.54
VK8	448/ 160)			
VK6	13808/1324	x	1.54	16 06
VK7	4841/ 160	x	1.43	12 70

Note: VK8 points and licence totals added to VK5.

Statistical Data Comparison 1984 to 1983

1984	No of Logs	Total Score	Avg Score	Licences	% Entry
VK1	34	5456	160	315	10.79
VK2	87	14959	172	4652	1 87
VK3	127	15207	120	4431	2 87
VK4	65	9578	147	2439	2 67
VK5	160	24380	152	1709	9.36
VK6	96	13808	144	1324	7.25
VK7	37	4841	131	545	6 79
VK8	6	448	75	160	3.75
Totals	*612*	*24828*	*41*	*15575*	*3.9*
1983					
VK1	30	6518	217	324	9.26
VK2	92	12239	133	4478	2.05
VK3	85	17497	206	4138	2.05
VK4	77	10013	130	2303	3.34
VK5	193	36320	188	1622	11 90
VK6	141	21451	152	1226	11.50
VK7	44	7410	168	478	9 20
VK8	10	1909	191	167	5.99
Totals	*672*	*113357*	*169*	*14736*	*4.56*

Distribution of Logs per Mode Comparison 1984 to 1983

	1984				1983		
	Phone	CW	Open	*	Phone	CW	Open
VK1	28	1	5	*	24	3	3
VK2	56	15	16	*	61	14	17
VK3	100	11	16	*	64	12	9
VK4	49	6	10	*	59	8	10
VK5	123	9	28	*	160	15	18
VK6	66	9	21	*	117	14	10
VK7	28	5	4	*	34	4	6
VK8	4.	1	1	*	7	1	2
Totals	*454*	*57*	*101*		*426*	*71*	*75*

Logs listed below were not accepted for the 1984 Remembrance Day Contest for two or more of the following reasons:—

No Front Summary Sheet, No Declaration, No total Claimed Score Shown, Untidy or Illegible, Incorrectly Claimed Score.

None of these logs incur any other penalty prescribed under the general 'Contest Disqualification Criteria'.

VK1BM, VK2ZL, VK2BQQ, VK2AXT, VK3BIT, VK3YNB, VK4ACC, VK4NUP, VK6YG, VK6WU, VK6IM, VK7RX, VK7WZ, VK7WZ

A total of at least 24 logs were closely scrutinised for possible disqualification, quite a number of them being logs submitted by radio clubs. I can only indicate this as a warning chaps that you must improve greatly on the quality of the logs and other necessary data required by the rules of the various contests as in future a much stricter approach will be adopted by the Contest Manager.

DIVISIONAL SCORES

VK1	
A Phone	3486
B CW	322
C SWL	263
D Open	1385
TOTAL	**5456**
VK2	
A Phone	8432
B CW	2515
D Open	4012
TOTAL	**14959**
VK3	
A Phone	10144
B CW	1530
C SWL	364
D Open	3169
TOTAL	**15207**
VK4	
A Phone	5361
B CW	838
D Open	3379
TOTAL	**9578**
VK5	
A Phone	16516
B CW	1230
C SWL	857
D Open	5777
TOTAL	**24380**
VK6	
A Phone	7355
B CW	1374
C SWL	1767
D Open	3312
TOTAL	**13808**
VK7	
A Phone	3604
B CW	672
D Open	565
TOTAL	**4841**
VK8	
A Phone	212
B CW	200
D Open	36
TOTAL	**448**

Licences per Division as provided September 1984
VK1 - 315, VK2 — 4652, VK3 — 4431, VK4 — 2439, VK5 — 1709, VK6 — 1324, VK7 — 545, VK8 — 160

INDIVIDUAL SCORES

VK1 Section A (Phone)

Callsign	*Score*
MX	312
ZL	303
PMN	276
PP	271
BG	242
GB	195
BAT	168
LF	138
SR	130
KV	123
ZAR	122
KRS	115
OK	112
HF	85
KHZ	85
KAA	83
NCB	77
RH	76
KEN	75
ZQR	73
CAY	68
RJ	63
RG	60
NM	50
ST	35
KAP	33
FM	21
WW	15

VK1 Section B (CW)

XX	322

VK1 Section C (Receiving)

L10071	263

VK1 Section D (Open, Phone & CW)

RM	533
GP	458
KAL	211
OH	132
CZ	51

VK2 Section A (Phone)

DCL	667
BFR	657
DVJ	559
DM	537
DQR	495
BAM	360
BTZ	360
HT	280
AGF	276
PD	261
SAR	247
PMX	246
AOA	228
WI	219
NW	208
BDN	181
DHU	168
PFQ	142
BID	133
APP	130
BDT	126
UC	118
AMV	113
AIC	112
PN	112
DUA	106
EJW	100
ELB	97
RP	90
KGX	85
BMX	82
BUT	78
RX	60
WT	52
CF	50
PY	50
DUS	49
NV	44
KCV	42
BGS	42
FJ	40
DXG	40
RE	34
XT	33
PS	32
AXJ	30
ERS	30
VYP	30
IV	30
CDG	30
EIA	30
AGB	29
BVU	23

VK2 Section B (CW)

ELF	338	AZR	140
AQF	312	QL	120
KM	294	BRC	64
EL	274	VM	54
II	232	XQ	50
TR	206	SW	34
SU	193	AV	32
DID	172		

VK2 Section D (Open, Phone & CW)

BO	579	BQS	213
ANO	475	BHO	186
CGL	437	RJ	182
DXS	419	ALZ	146
DVU	344	PRB	83
DQP	296	BQ	64
DOQ	266	ADR	42
EBM	240	HQ	40

VK3 Section A (Phone)

ADW	596	BEE	62
PUB	483	NBL	60
DSI	476	DET	60
CNE	429	JI	58
DMZ	310	ZFI	56
AKK	294	OM	53
DMW	249	DBS	51
BJN	244	BJM	50
BRZ	241	XH	50
DAK	240	BAS	48
NLS	212	ATL/P	46
AMM	207	KPH	41
FR	203	KAV	37
DKS	200	KK	35
UV	200	DWF	35
XQ	178	DVM	34
KJI	178	BRY	32
BGS	174	XYX	31
SZ	162	DIP	31
DWG	160	PC	30
CRA	159	DS	30
YRP	148	AIH/M	30
DBQ	142	AGJ	30
KJH	142	AWI	29
DNM	135	AN	28
DHF	134	XBA	27
BMV	132	CGH	27
BME	131	BGW	26
PW	131	AOM	26
ZI	127	NBE	26
PBD	124	PJS	23
AYF	124	BQB	22
ZJ	119	KAH	21
AMW	111	VKC	19
QZ	109	ZBI	19
ABP	105	ZWI	18
AOJ	105	NZR	16
KCT	103	ZPP	16
ANP	100	BYY	14
CIF	94	BZQ	14
DVT	86	QT	13
GA	81	ARA	12
WU	81	PBO	12
BYA	80	YW	12
YKT	76	VAN	12
KEJ	76	2KQF/3	11
ZNE	76	BLE	11
DSW	70	2EFJ/3	10
XDJ	70	DMS	10
BFN	63	ALD	10

VK3 Section B (CW)

KF	250	RJ	124
BDH	200	YK	112
ANJ	174	BKU	100
DG	148	DPW	94
PL	146	DVW	42
FC	140		

VK3 Section D (Open, Phone & CW)

BUR	545	BSF	149
VT	538	SM	120
BOD	395	AWY/P	65
XB	320	DOV	60
DNC	278	KPP	48
KS	233	KCC	36
XF	177	DNP	30
AMD	150	WW	25

VK3 Section C (Receiving)

L30037	300	L30371	64

VK4 Section A (Phone)

Callsign	Score
VAT	665
AEV	417
WIZ	391
ARD	286
VR	263
AGL	240
NIL	195
YX	156
AZA	153
AWO	144
JFA	140
YN	139
BNL	135
FN	135
AOE	126
ACW	118
ZA	118
PJ	115
UJ	112
AMB	111
AKI	109
ABY	101
AEM	100
ZBV	96
AGQ	80

VK4 Section B (CW)

Callsign	Score
BDR	262
XA	248
BRZ	194

VK4 Section D (Open, Phone & CW)

Callsign	Score
AEB	812
LT	745
WIS	549
AOH	360
YG	321

VK5 Section A (Phone)

Callsign	Score
QX	768
ATN	666
CGR	662
NX	577
ADD	569
FF	532
KCX	512
ALE	501
BJA	480
DJ	451
SU	442
KLJ	362
AC	356
DI	352
OR	330
JM	307
ABX	245
XC	244
TZ	233
NMR	214
KMH	207
SS	207
TP	204
AQZ	203
YJ	200
DK	190
OZ	173
ANW	165
AGW	165
EA	162
KPM	158
TC	144
FV	141
AVQ	141
AEI	136
OU	135
NTX	130
LP	124
ZDJ	120
ATM	116
KLH	114
KCR	114
AAJ	112
SG	110
LL	110
AJG	106
ATW	103
AWF	102
KX	102
GN	101
CY	100
UJ	100
AIM	100
RR	100
ACW	100
TW	98
AGP	66
ALM	62
CZ	60
BDE	57
AUK	46
HZ	39
WIN	38
NYE	36
ASB	31
BPW	30
BOB	30
DV	29
VS	24
OY	22
KD	20
QW	20
RC	20
GT	15
YEA	14
AGS	13
RE	12
RX	12
BB	10
ZN	10
SF	58
XJ	52
NBL	24
AQD	164
NUN	142
AIX	140
BG	96
UG	50
KMJ	95
ACE	92
QH	86
BXG	83
ZBC	81
NWT	80
ZB	78
FA	77
AJK	73
GV	71
APD	70
XT	69
BVJ	65
KAA	63
KV	62
JQ	62
NEI	61
PPN	60
ZHV	60
ZZ	59
ADR/P	55
KF	55
NF	55
OF	53
AMF	51
EC	50
AOL	50
FL	47
CO	46
ST	45
NOS	45
PBY	44
LN	44
ABS	42
KCI	40
IT	35
EV	35
WS	35
AMW	32
YO	31
BGY	31
HM	30
DH	28
RF	27
SCN	25
ZJ	25
KJT	23
ALD	22
NPC	18
KAK	17
ZFH	17
BDG	16
KRC	16
WO	16
CA	15
ML	15
NEG	15
VY	15
JK	15
LC	15
IX	15
ZPT	12

VK5 Section B (CW)

Callsign	Score
BN	394
AGX	368
AK	106
HO	106
FM	100

VK5 Section D (Open, Phone & CW)

Callsign	Score
AYD	527
FN	462
GZ	418
APC	414
AH	360
AAC	351
ARC	342
BPA	311
ZN	308
NOD	282
XI	257
BI	230
LZ	229
AOZ	169

VK5 Section C (Receiving)

Callsign	Score
Whitford	618
L50122	129

VK6 Section A (Phone)

Callsign	Score
AAE	613
XV	410
DE	399
JP	395
FE	317
OR	295
KLZ	264
CX	249
WH	244
HM	241
AR	240
NWA/P	203
ZLZ	184
NTJ	179
DA	161
ARG/P	144
KG	135
BO	135
QH	130
ALD	128
QN	125
FC	123
NTZ	119
WIA/P	117
WL	108
ZOT	101
WT	95
ZRE	92
NMS	87
DC	85
MY	80
ZKL	77
NOM	76
3BRL/5	12
AG	12
ZKK	11
AMK	10
AGR	10

VK6 Section B (CW)

Callsign	Score
HQ	370
WT	292
AFW	192
RF	136
AJ	114
TL	60
VW	42
JG	34
BY	20

VK6 Section D (Open, Phone & CW)

Callsign	Score
ED	548
UH	420
ZIT	256
QF	249
FS	231
AD	212
RU	206
NLD	205
AGC	205
ABR	144
RO	133
RA	139
ZTJ	119
ZOB	112
FX	103
IM	92
KL	84
AOK	81
RG	76
AUS	75
AQ	68
MX	58
RK	49
ZML	44
AIF	17

VK6 Section C (Receiving)

Callsign	Score
L60051	963
L60228	480
L60036	188
L60068	136

VK7 Section A (Phone)

Callsign	Score
KZ	493
NW	480
PL	267
ML	203
HK	201
KC	197
HD	159
FL	159
NMU	145
NAI	141
JU	130
NIM	107
NWR	107
DG	105
QF	92
SA	85

VK7 Section B (CW)

Callsign	Score
CH	230
RY	218
SB	174

VK7 Section D (Open, Phone & CW)

Callsign	Score
JE	252
KR	159

VK8 Section A (Phone)

Callsign	Score
BD	100
DI	67

VK8 Section B (CW)

Callsign	Score
HA	200

ZL Section A (Phone)

Callsign	Score
2ADN	54
1IM	30

ZL Section D (Open, Phone & CW)

Callsign	Score
1GQ	518
4QY	83
RM	80
RN	62
LH	61
ZPK	53
BM/P	50
KAJ	46
KKR	45
MX	30
BJ	30
KAB	28
ZJG	26
FD	22
RQ	26
NBF	24
AL	107
GB	47
KTT	23
GB	22

VK8 Section D (Open, Phone & CW)

Callsign	Score
DH	36

ZL Section B (CW)

Callsign	Score
2BDC	68

P2 Section A (Phone)

Callsign	Score
9ZL	257

THE WIRELESS INSTITUTE OF AUSTRALIA CW CONTEST

This contest was inaugurated to celebrate the 75th Anniversary of the formation of the Wireless Institute of Australia — the oldest radio society in the world

It was considered that with the advent of modern equipment and methods, there was a need to further the ability of Morse knowledge, practice and skill.

This contest is not directed at speed but at promoting CW — the communication mode used by radio amateurs since the very first days.

A suitable certificate has been prepared but for this special year all logs returned by VK amateurs with more than 75 contacts will receive a specially prepared commemorative memento.

The overall VK winner will also receive the "FEDERAL PRESIDENTS CUP". This cup was first

Photograph by Ken McLachlan VK3AH

presented in the year 1930 to the "KEY SECTION WIA".

RULES

PERIOD 0000 UTC 10th MARCH to 2359 UTC 10th MARCH 1985
MODE CW-CW ONLY, single operator
CALL CQ 75 TEST
EXCHANGE RST+ 3 FIGURE SERIAL NUMBER
BANDS ALL EXCEPT 10, 18, 24 MHz
SECTIONS (a) FOREIGN — single band
(b) FOREIGN — multiband
(c) AUSTRALIAN — single band
(d) AUSTRALIAN — multiband.
OBJECTS FOREIGN — one contact per band with any Australian station.
AUSTRALIA — one contact per band with any other station.
POINTS 3 points for contacts on 1.8 and 3.5 MHz
2 points for contacts on 7 MHz
1 point for contacts on all other bands
SCORING SINGLE BAND points on that band multiplied by the number of different prefixes worked on that band. WPX RULES APPLY.
MULTIBAND as above for each band added together.
LOGS TO: CONTEST MANAGER, CW 75, BOX 1065, ORANGE, NSW 2800.

COMMONWEALTH CONTEST 1985

WHEN 1200 UTC Saturday 9th March to 1200 UTC Sunday 10th March.

MODE CW (A1A) only in the 3.5, 7, 14, 21 and 28 MHz bands. Call is CQ BERU. The Commonwealth Contest is a single operator, single transmitter event.

Eligible entrants are radio amateurs licensed to operate in British Commonwealth call areas as listed below.

A Contest exchange consists of RST plus a three figure serial number commencing with 001 and increasing by one for each successive contact throughout the contest, irrespective of band in use. Serial numbers sent from non-competing stations must be recorded.

SCORING 5 points for each contest exchange 20 bonus points for each of the first, second, and third contact in each call area, as listed, on each band. Contacts with ones own call area do not count at all. Note that G, GD, GM etc are counted as one area.

LOGS Separate logs are required for each band showing columns

1 Date and time UTC
2 Station worked
3 RST/Serial number sent
4 RST/Serial number received
5 Band
6 Leave blank (for checking)
7 Contact points claimed
8 Bonus points claimed

Separate band totals should be added together and the total claimed score entered on a cover sheet giving particulars of station, QTH, equipment, power, antenna and a declaration that the rules and spirit of the contest have been observed.

It is important that logs are carefully checked for duplicate contacts. Unmarked duplicate contacts for which points have been claimed will be heavily penalized, and logs containing in excess of five will be disqualified.

Entries may be single or multiple band. Single band entries should claim contacts on one band only, but details of contacts on other bands should be submitted for checking purposes only.

Entries should be addressed to

AK GRAY G4DJX,
44 Sherwood Avenue,
St Albans Herts AL49PQ, UK

Closing date 13th May 1985.

All entries become the property of the RSGB. In the event of any dispute, the ruling of the Council of the RSGB shall be final.

AUSTRALIAN AWARDS

1 An individual award to the highest VK scorer a gold medallion.
2 A State Team award — 4 silver medallions to the state team of 4 which achieves the highest aggregate total. If the "individual" winner is a member of this team, he will receive the gold medallion instead of the silver one.
3 An award to the middle placing among VK entrants i.e. to, say the 27th placing among 53 or 54 entrants — a bronze medallion.

Note that there have been a number of additions to the call areas this year — ZC4 and 5B4, 9H and 9H4, VO1 and VO2, and ZL0 are now separate areas.

It is to be hoped that conditions have picked up a little by BERU week-end. Let us see if last year's record entry of 66 VKs (VK1-2, VK2-13, VK3-23, VK4-8, VK5-7, VK6-7, VK7-6, VK8-9-0 nil) can be improved on in 1985.

COMMONWEALTH CALL AREAS

The following call areas are recognized for the purpose of scoring in the 1985 Commonwealth Contest:

A2	Botswana
A3	Tonga
A5	Bhutan
C2	Nauru
C5	Gambia
C6	Bahamas
G/GB/GD/GI/GJ/GM/-GU/GW	
H4	Solomon Is
J3	Grenada
J6	St Lucia
J7	Dominica
J8	St Vincent
P2	Papua New Guinea
S7	Seychelles
T2	Tuvalu
T30	W Kiribati
T31	C Kiribati
T32	E Kiribati
V2	Antigua, Barbuda
V3	Belize
VE1	Maritime Provinces
VE1	Sable Is
VE1	St Paul Is
VE2	Province of Quebec
VE3	Province of Ontario
VE4	Province of Manitoba
VE5	Province of Saskatchewan
VE6	Province of Alberta
VE7	Province of Br. Columbia
VE8	North West Territories
VK1	Australian Capital Ter
VK2	New South Wales
VK3	Victoria
VK4	Queensland
VK5	South Australia
VK6	Western Australia
VK7	Tasmania
VK8	Northern Territories
VK9L	Lord Howe Is
VK9N	Norfolk Is
VK9X	Christmas Is
VK9Y	Cocos Keeling Is
VK9Z	Mellish Reef
VK9Z	Willis Is
VK0	Heard Is
VK0	Macquarie
VK0/VP8/ZL5	Antarctic
VO1	Newfoundland
VO2	Labrador
VP2E	Anguilla
VP2K	St Kitts, Nevis
VP2M	Montserrat
VP2V	British Virgin Is
VP5	Turks & Caicos
VP8	Falkland Is
VP8	S Georgia
VP8	S Orkneys
VP8	S Sandwich Is
VP8	S Shetland Is
VP9	Bermuda
VQ9	Chagos
VR6	Pitcairn
VS5	Brunei
VS6	Hong Kong
VY1	Yukon
VU	India
VU	Laccadive Is
VU7	Andaman & Nicobar Is
YJ	Vanuatu
Z2	Zimbabwe
ZB2	Gibraltar
ZC4	Cyprus (UK Bases)
ZD7	St Helena
ZD8	Ascension Is
ZD9	Tristan da Cunha, Gough Is
ZF	Cayman Is
ZK1	Cook Is
ZK1	Manihiki
ZK2	Niue
ZK3	Tokelau
ZL0*	
ZL1*	
ZL2*	
ZL3*	
ZL4*	
ZL7	Chatham Is
ZL8	Kermadec Is
ZL9	Auckland & Campbell Is
3B6/3B7	Agalega & St Brandon
3B8	Mauritius
3B9	Rodriguez Is
3D2	Fiji
3D6	Swaziland
4S	Sri Lanka
5B4	Cyprus
5H	Tanzania
5N	Nigeria
5W	Western Samoa
5X	Uganda
5Z	Kenya
6Y	Jamaica
7P	Lesotho
7Q	Malawi
8P	Barbados
8Q	Maldives
8R	Guyana
9G	Ghana
9H	Malta
9H4	Gozo & Comino
9J	Zambia
9L	Sierra Leone
9M2	W Malaysia
9M6/9M8	E Malaysia
9V	Singapore
9Y	Trinidad & Tobago

* Due to recent changes in the New Zealand licence allocations ZL0, ZL1, ZL3, & ZL4 will count as separate call areas for the purpose of this contest

1985 CLARA AC/DC "MYSTERY" CONTEST

SPONSORED BY THE CANADIAN LADIES AMATEUR RADIO ASSOCIATION.

STARTS: 0000 UTC TUESDAY 28TH MAY, 1985.
ENDS. 0000 UTC WEDNESDAY 29TH MAY, 1985.

The AC/DC Mystery Contest is open to all YL and OM amateurs as well as SWLs. Each CLARA station may be worked twice, once on CW and once on PHONE, or same mode on two different bands. Exchange name, serial number starting with 001, RS(T), QTH and if a CLARA member. Three unidentified "Mystery" stations will be operating.

SUGGESTED FREQUENCIES: PHONE
28.488 28 588 21.300 14 160 14.280 7.150 3.775 3.900 MHz

SUGGESTED FREQUENCIES: CW
28.035 21 035 14.035 7.035 3.690 MHz

All contacts must be made in accordance with operator and station licence regulations. No net or list operations, no crossmode. No 10 m or 2 m repeater contacts.

SCORING: For the base score, CLARA members score one point per contact with non members (whether OM or YL), two points per contact with CLARA members, and three points for each CW contact.

NON-MEMBERS. For the base score count two points for each CLARA contact, three points for CW contacts. Multiply the Base Score Points by the number of Canadian Provinces/Territories worked for the total score. The Contest Manager will add ten points to the base score of each log for every "MYSTERY" station contacted.

AWARDS: CLARA MEMBERS:
1st place. "CLARA CUP" and certificate.
2nd place. Certificate.

NON-MEMBERS:
1st place. Plaque.
2nd place. Certificate.
SWL. Certificate.
DX station. Certificate.

All logs submitted are eligible for the Mini prize draw.

LOGS: Single log entry. Logs must show DATE/TIME UTC, BAND, MODE, CALLSIGN WORKED, REPORT AND SERIAL NUMBER SENT, REPORT AND SERIAL NUMBER RECEIVED, NAME OF OPERATOR OF STATION WORKED, QTH and points claimed.

LOGS MUST BE SIGNED. Logs also to show full name, callsign and address of operator, and show final score (points claimed not including mystery stations) Logs must be legible No carbon copies. No logs will be returned. Decision of the Contest Manager will be final. Logs must be received by the contest manager before 15TH JULY, 1985.

CONTEST MANAGER: Muriel Foisy VE7LQH
RR#1, PENDER ISLAND, BC,
CANADA V0N 2M0

AR

USE OF DUAL CALL SIGNS

The Department of Communications does not wish to encourage this practice, but confirms that there are no basic objections to a qualified amateur holding more than one amateur station licence (call sign). It is stressed, however, that in such cases it is the amateurs responsibility to ensure that operation is in accordance with the conditions applicable to the class of licence in use

AR

VIDEO TAPES — BETA

A reminder to all amateurs. Video tapes from the WIA Video Cassette Library are now available in the BETA format as well as VHS.

Full information for using the Video Library appeared in October AR, page 36 or contact the Video tape Co-ordinator, John Ingham VK5KG, 37 Second Avenue, Sefton Park, SA, 5083. AR

WIA VIDEOTAPE PROGRAMME TITLE LISTING

See Note	TITLE (in chronological order within each subject grouping)	Lecturer	Prod.	Approx. Dur.	Col./ B&W	Year Prod.	Description and Other Information
	GENERAL PROMOTIONAL FILMS						
–	The Ham's Wide World		ARRL	30 mins	Colour	1969	Superceded by "The World of Amateur Radio"
–	This is Amateur Radio		ARRL	15 mins	Colour	1970	Pitched at teenagers
–	Moving Up to Amateur Radio		ARRL	15 mins	Colour	1975	Pitched at CBers
©	7J1RL DXpedition		JARL	60 mins	Colour	1976	General amateur radio interest; *Loan Only*
–	This Week has 7 Days looks into Amateur Radio		HSV7	25 mins	Colour	1978	Pitched at teens; includes some ARRL footage
–	Amateur Radio – The National Resource of Every Nation		VK5KG	6 mins	Colour	1979	Encapsulates AR; good for public exhibitions
–	The World of Amateur Radio		ARRL	30 mins	Colour	1982	Pitched at adult level
	HISTORIC INTEREST						
©	Wireless Telegraphy – circa 1910		?	10 mins	B&W	1910	Archive material courtesy David Wardlaw, VK3ADW
–	Opening of Burley Griffen Bldg SA HQ		VK5KG	50 mins	Colour	1977	Archive material
–	History of ATV in South Australia		VK5KG	30 mins	Colour	1980	Archive material, still building
–	ATV in Australia 1978 – made for British ATV Club		VK5KG	30 mins	Colour	1978	Archive material
–	ATV in United Kingdom 1978 – reply from BATC		G8CJS	30 mins	Colour	1978	Archive material
©	Heard Island Expeditions	ch	2,7,9,10	20 mins	Colour	1984	Archive material, *No Loan of Copy Available*
	ANTENNAS & PROPAGATION						
©	G6CJ's Aerial Circus	G6CJ	WIA	90 mins	B&W	1977	The Definitive Antenna Lecture; *Loan Only*
–	Wire Antennas	VK5RG	VK5KG	40 mins	B&W	1978	Antennas for HF and Antenna Tuners
–	Loaded Wire Antennas	VK5NN	VK5KG	50 mins	Colour	1980	Using Inductive and Capacity loaded Antennas
–	Getting Started in Understanding the Ionosphere	VK5NX	VK5ZBD	50 mins	Colour	1983	How the Ionosphere aids HF communication
	SPACE – GENERAL INTEREST						
–	Apollo 13 Disaster	VK5JN	VK5KG	90 mins	Colour	1980	Australian tracking procedure saved Apollo 13
–	SSTV Pictures from Space – Voyager		VK5KG	15 mins	Colour	1983	SSTV pix converted from Saturn fly-past
*	Amateur Radio's Newest Frontier		ARRL	24 mins	Colour	1983	Shows "Ham in Space" – Shuttle STS-9
–	Aussat – Australia's Domestic Comms. Satellite	VK5JN	VK5KG	?	Colour	1984	In Production
	AMATEUR SATELLITES						
–	Lecture – Tracking Oscar	VK5HI	VK5KG	40 mins	B&W	1978	Superceded (see below)
–	Getting Started in Amateur Satellites	VK5HI & VK5AGR	VK5KG	60 mins	Colour	1983	Superceded (see below)
–	An Introduction to Amateur Satellites (Pt 1)	VK5AGR	VK5KG	60 mins	Colour	1984	An overview of Amateur Satellite working
–	Micro-Computer Aids to Satellite Tracking (Pt 2)	VK5AGR	VK5KG	30 mins	Colour	1984	Programmes for tracking & decoding telemetry
–	Using Phase III Amateur Satellites	VK5HI	VK5KG	90 mins	Colour	1984	History, construction & use of high orbit sats.
	DATA TRANSMISSION						
–	Lecture – RTTY	VK5QX	VK5KG	40 mins	B&W	1978	Superceded (see below)
–	Getting Started in Amateur RTTY	VK5JN	VK5KG	85 mins	Colour	1983	RTTY using Teleprinters and Micro-Computers
–	Amateur Packet Radio	VK5AGR	VK5KG	60 mins	Colour	1984	Theory and Demonstration
	AMATEUR COMPUTERS						
–	Demo of VK5RTV's Micro-Computer Controller #1	VK5KG	VK5KG	10 mins	Colour	1979	First µ-Computer controlled repeater in VK
–	Lecture – History of Micro-Processors	Rick Matthews	VK5KG	60 mins	Colour	1979	Now somewhat dated, but still sound
–	Understanding Micro-Processors	VK5PE	VK5KG	60 mins	Colour	1980	A somewhat dated technical description
–	An ATV Hamshack Micro-Computer	VK3AHJ	VK3AHJ	10 mins	Colour	1981	Describes now unavailable Micro-Computer kit
–	Getting Started in Amateur Micro-Computers	VK5IF	VK5KG	33 mins	Colour	1983	Demo of hard & software for amateur radio
	AMATEUR TELEVISION – TECHNICAL						
–	The Signal to Noise Story	VK3ATY	VK3AHJ	45 mins	Colour	1982	Superceded by "UHF Pre-amplifiers" (see below)
–	UHF Preamplifiers	VK3ATY	VK3AHJ	45 mins	Colour	1983	Explanation and demo. of low noise preamps
–	Getting Started in Amateur Television	VK5KTV	VK5KG	55 mins	Colour	1983	How to set up an ATV station
–	Testing ATV Transmitters	VK5KG	VK5KG	50 mins	Colour	1983	How to correctly measure ATV systems
*	High Definition TV Tutorial	Don Fink	WB2LLB	60 mins	B&W	1983	A look at what is to come in broadcast TV
*	ATV Hamfest, York, Pennsylvania, Sept. '83	Various	WB2LLB	6 hrs	Colour	1983	Various ATV technical lectures from USA
	AMATEUR TELEVISION – ACTIVITY						
–	ATV in Australia 1980/81 – Made for British ATV CLUB		VK5KG	60 mins	Colour	1980	Clips from ATV Groups in VKs 2, 3, 4, 5 & 7
–	ATV in United Kingdom 1978/81		G8CJS	30 mins	Colour	1981	Remake of their previous effort
*	CQ ATV DX International 1983		WB2LLB	60 mins	Colour	1983	ATV in USA and Europe
–	ATV in Victoria, 1984		VK3AHJ	54 mins	Colour	1984	Courtesy of "The Roadshow Gang"
	AMATEUR TELEVISION – GENERAL INTEREST						
–	Low Definition Television	Chris Long	VK5KG	25 mins	Colour	1982	Re-creation of TV as transmitted by Baird
*	Overseas TV Clips about ATV, etc.		WB2LLB	60 mins	Colour	1983	Broadcast TV clips from USA and Europe
–	Model Aero-Nautical Mobile ATV	VK5GO	VK5KG	6 mins	Colour	1983	ATV camera & Tx mounted in a model aeroplane
	MISCELLANEOUS						
–	An Auxiliary Battery Charger	VK5NX	VK5KG	30 mins	Colour	1981	Charging a second mobile battery
–	Lecture – Winning Foxhunts	VK5TV	VK5KG	45 mins	Colour	1981	How to do it from one who has!
–	Getting Started in Amateur Construction	VK5AIM	VK5KG	50 mins	Colour	1983	Mechanical hints for novice constructors
–	Comms. Consequences of Nuclear War	Dr. John Coulter	VK5ZBD	60 mins	Colour	1983	Why your gear may not survive even if you do!
–	The Far Eastern Broadcasting Company		VK5KG	60 mins	Colour	1984	How a Short Wave Broadcaster operates
–	The Australian "Over the Horizon Radar"		VK5KG	60 mins	Colour	1984	How the "Australian Woodpecker" works

NOTE: © = Copyright; no copy service is available. * = Optically Converted to PAL from NTSC by WB2LLB; some flicker evident.

*** NEW What to Expect When the "RI" Calls! by Geof Carter. Geof is a Department of Communications Field Officer. The video runs for 34 minutes, is in colour and was made in 1984.

CLUB CORNER

CENTRAL COAST AMATEUR RADIO CLUB

AN INVITATION: All amateur radio operators, their families, friends and all interested in amateur radio are invited to attend the Club's 28th Annual Field Day on Sunday, 17th February 1985 at the Showground, Showground Road, Gosford, NSW.

REGISTRATION: Men: $4, Women: $2, Children 16 years and under: $1 (Includes morning and afternoon tea, event entry and outings).

FAMILY GROUPS: Mother and father plus two or more children 16 years and under together: $7.

PENSIONER CONCESSION: 50 percent on production of appropriate pensioner concession cards.

FOOD SERVICE: Tea, coffee and biscuits 08:00 — 17:00 hrs in the Dining Room at no additional charge. Takeaway food will be available in the Showground. You may bring your own lunch and avail of tea or coffee from dining room at lunch time.

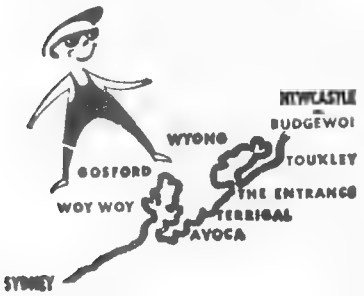
EVENT ENTRY: If you are planning to enter any radio event (including junior events) please fill in an EVENT REGISTRATION card. Cards will be available after entry to the Showground.

SCRAMBLE RULES: No operation in Showground or 1 km radius. No operation on Gosford repeaters or within 1 km radius of repeater sites. Log extract to "EVENT ENTRY REGISTRATION" before 10:00 showing time of contact, station worked, mode, band and full serial numbers. Incomplete or late logs are not eligible. Scoring 1 point per station per band regardless of mode. You may rework the same station on several bands.

OUTINGS: (a) Reptile Park (b) Bus Tour (departs 12:30). Obtain complementary tickets for either outing by presenting registration card to "TICKETS". Transport to and from Reptile Park is by private car. Reptile Park tickets are valid for any time of the day 17.2.85 only. Bus Tour tickets are limited to one bus load on a first come basis.

DISPOSALS: Obtain catalogue forms and lot numbers in advance of the Field Day from Bill Smith VK2TS, RMB 4525, Mangrove Mountain, NSW 2250 (phone after hours (043) 74 1207). Forms and lot numbers also available at the Showground on Saturday afternoon, 16.2.85. All items for disposals must be booked in before 09:30 17.2.85. Late arrivals or equipment improperly tagged or catalogued may be refused.

CENTRAL COAST



TRAINS: The following trains will be met by a special complementary bus at Gosford Railway Station: 07:15, 08:15 and 09:15 from Sydney; 07:47 and 09:03 from Newcastle. For return transport to station in the afternoon, contact "INFORMATION" at least one hour before departure time.

IF IT RAINS? The Field Day will be held wet or dry; there is plenty of shelter in the Showground.

CALLS PRESENT: Bring your QSL card for the "CALLS PRESENT" board.

PARKING: Off street at Showground. Please observe IN and OUT gates.

SPECIAL ATTRACTIONS: Trade Displays, Ladies Stall, Children's Events.

AR

NATIONAL PARKS (FUN WITH A GOAL)

The Mildura Amateur Radio Club set out for a fun-filled weekend of camping and radio operating — the goal set was to activate the National Parks Award. Participation and interest proved to be beyond our wildest dreams. Unfortunately, with the minimal research conducted, we found the award had not been active for some time. However, since then the award has been reactivated including a new park.

As said before, this activity raised a lot of interest, and the camp-out was so enjoyable it was decided to make the outing an annual event, on the Labour Day long weekend in March.

The camp on the banks of the Murray River, at a place called Chalker Creek, is not so hard to find if you turn off the highway at the Hattah Store and follow the signs. It's easy, as the Park Ranger found. We were confronted by a six foot individual in uniform — very official looking — saying *"Is this VK3BUR?"* Our first thought was *"What have we done wrong?"*, only to be congratulated on keeping a tidy camp. It was at this moment he made a monumental mistake and asked if we had any rubbish. We then proceeded to place truckloads of full rubbish-bags into the back of his four wheel drive, and he hasn't been seen since.

One essential for a successful camp is a raging great camp fire and ours was no exception, with a communal hotplate. After the noon meal, we set out fishing. The evening brings a satisfying meal and a lot of conversation around the campfire.

You might ask one question — *who operates the radio, and when?* Well, whoever feels like it, and when someone relinquishes the operating chair. The frequencies used are 40 metres during the daytime, 80 metres at night and channel 50 on 2 metres for directions to incoming parties to our camp of merriment.

Obviously our club alone cannot offer award-seekers a large amount of assistance, but if other clubs were to participate in similar activities it would make a near impossibility a reality.

So, the obvious thing is we would like other clubs to participate finding the closest mutually agreeable National Park and operating from that location. Details of the award are available from the WIA Vic Div or see page 42, August 1984. Any individuals wishing to participate are more than welcome to join us at Hattah National Park. An amateur call sign is not necessary to participate. Non-licensed operators will be supervised by licensed amateurs using the club call VK3BUR.

Any further enquiries relating to the weekend can be directed to — David Norris VK3DWN, PO Box 231, Mildura, Les VK3BPW, Marlene VK2KFQ, Ron VK2EFJ or Maurie VK3CWB.

Contributed by David Norris VK3DWN

*** See Awards column on page 40 for an update of the National Parks in VK3.**

CAIRNS AMATEUR RADIO CLUB

For amateurs in the Cairns area of Queensland please note that the Cairns Amateur Radio Club meets on the second Tuesday of each month except January when there is no scheduled meeting.

At a recent Annual General Meeting, Colin Swinburn VK4EX was re-elected President and Anne Benson VK4FAB was re-elected Secretary.

Monthly meetings are held in the State Emergency Service building, McNamara Street, Cairns at 8 pm.

Contributed by Anne Benson VK4FAB Secretary.

AR

THE SEVENTH ANNUAL GOLD COAST ARS HAMFEST

This function is held annually to raise funds for the building of the Society's Club Rooms and Headquarters, which have now reached the stage of having the roof put onto the building.

The Hamfest raised over $700 and was attended by between 600 and 1000 persons, including several overseas amateurs.

A very good media coverage of the Hamfest and amateur radio in general was given by the Gold Coast Bulletin by their feature journalist John Dwyer.

Prior to the Hamfest the GCARS received two generous donations — for the building fund — $3000 from the QEII Jubilee Trust for Young Australians because of the Society's interest in training youth, Girl Guides, Scouts etc in communications and for upkeep of the repeater station — $200 from the Gold Coast City Council.

Contributed by Bill Stevens VK4YN President.

AR

TOWNSVILLE ARC

Late last year the TARC elected office bearers for the next twelve months. President is Bob Mann VK4WJ and Secretary is Arnie Katarzynkski VK4JXZ.

AR

GYMPIE ARC

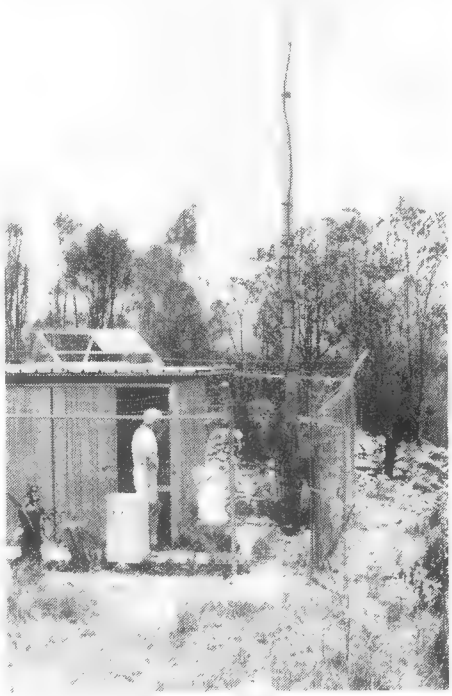
See cover photograph

On Sunday the 25/11/84 it was working bee day at the repeater site of the Gympie Amateur Radio Club at Boulder Mountain, 20 km SE of Gympie.

The club has been operating a 2 metre repeater on the site for one year and recently finished construction of a 70 cm repeater for the site.

It was decided to extend the height of the metal free standing tower another 6 metres to allow for the extra antennas and separation.

A special hydraulic ram machine was made by one club member for the lowering of the 15 metre tilt over tower and it was with a great deal of enthusiasm members left Gympie on the 28 km drive to the mountain.



The Hydraulic lifter in place to lower the tower.

Upon arriving, we removed the 70 cm test antennas and proceeded to gingerly test our lowering device. All went well and within 10 minutes of arriving, we were working on the antennas.

With the extension in place, the 2 metre colinears

Harry VK4KHG supervising the final lowering of the tower.

Working on the tower.

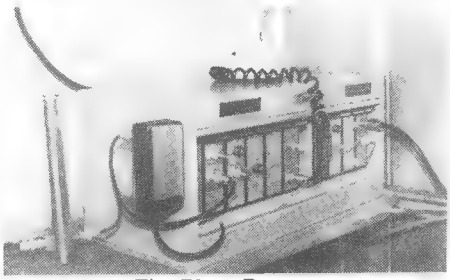
were given a little extra separation.

The site is quite isolated so the only power on the site is from solar energy, and the club is using a solar panel with an output of 2 amps maximum charging a 200 AH 12 volt battery.

The solar panel was mounted on the tower also, so that it would be uneffected by shadows.

The 70 cm antennas were home-brew coaxial colinears, sealed inside fibreglass fishing-rod blanks, and were mounted on 50 cm stand-offs. These were clamped to the tower at 10 foot vertical separation, and 2 runs of heliax installed in place. Everything was clamped up and the hand pumping of the lifting gear commenced. Within 10 minutes the tower, now with an all up height of over 65 feet, was again vertical.

The 2 metre Repeater.



The 70cm Repeater.

The coax was first connected to the 2 metre unit and was checked. All was as before. Then the 70 cm coax was connected to the Philips SC-9, through the GaAsFET pre-amp, and with a bit of tuning, was found to be performing very well, with little or no desensing on the input signal.

To date, regular callers as far as Surfers Paradise (250 km) to the south and Bundaberg to the north (160 km) have been working through the 70 cm repeater, and performance has been at least on par with the 2 metre repeater.

In future projects, the Gympie club is looking towards the possibility of a beacon of some type, but at this stage it is only a pie in the sky, not an antenna.

Story and photographs contributed by Tony Clarke VK4AJB

AR

TEST EQUIPMENT

Melbourne's largest range of secondhand:

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Marconi

Solartron

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Oscilloscopes, sig gens, spectrum analysers, multi meters. Wide range of valves, coaxial connectors and test accessories. Repairs and service to all makes and models.

DATON ELECTRONICS
20 Cahill St., Dandenong,
793 3936

SPECIAL NOTICE FOR ALL VK6 MEMBERS

The Annual General Meeting of the Western Australian Division of the WIA will be held on the 16th April, 1985. Full details will appear in the WA Bulletin column of March AR.

welcome here

A Call to all holders of a

NOVICE LICENCE

Now you have joined the ranks of Amateur Radio, why not extend your activities?

THE WIRELESS INSTITUTE OF AUSTRALIA
(N.S.W. DIVISION)

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NEW DEBEGLASS WIRE

That's stronger than wire . . .
Is non-conductive . . .
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Virtually no elongation . .

NOW GUY YOUR TOWERS WITHOUT HAVING TO BREAK THE GUYS USING DOZENS OF EGG INSULATORS OR WORRY ABOUT THEM CORRODING AWAY WHEN IN A HIGH SALT AREA. OUR NEW DEBEGLASS WIRE IS MANUFACTURED FROM CONTINUOUS FILAMENT FIBREGLASS YARN JACKETED IN UV STABILISED VINYL CHLORIDE. JUST COMPARE THE FIGURES IN THE TABLE OPPOSITE.

Trade enquiries are welcome

COMPARISON OF WIRE STRENGTH	DB-4 (4mm dia)			DB-5 (5mm dia)		
	CORE DIA mm	WEIGHT OF 200mm	TENSILE STRENGTH kg	CORE DIA mm	WEIGHT OF 200mm	TENSILE STRENGTH kg
DEBEGLASS	2.5	3.9	430	3.0	6.3	560
STEEL WIRE	2.5	5.6	370	3.15	9.3	530
MANILA ROPE	4.0	2.35	130	—	—	—
CREMONA ROPE	4.0	2.10	176	5.0	3.10	264
POLYETHYLENE ROPE	4.0	1.66	180	5.0	2.60	270
NYLON ROPE	4.0	1.97	330	5.0	3.08	500

MAKE SURE YOU ARE EQUIPPED FOR YOUR TOWER WORK THIS SUMMER. GET OUR DEBEGLASS WIRE NOW!

DB-4 (4mm) ..... $0.46/m DB-5 (5mm) $0.68/m

Write for a brochure.

LOW LOSS FOAM DOUBLE SHIELDED COAX CABLES

1. *Heavy gauge soft drawn copper centre*
2. *Low loss foam dielectric*
3. *Aluminium-mylar contiguous shield*
4. *High density tinned copper braid*
5. *Heavy duty UV stabilised sheath*

LOSS IN dB/20 METRES				
TYPE	100MHz	200MHz	400MHz	900MHz
5D-FB	1.86	2.70	3.90	6.00
8D-FB	1.20	1.74	2.58	3.90
10D-FB	0.99	1.44	2.10	3.30
12D-FB	0.84	1.23	1.80	2.79
RG-58/AU	4.32	N/A	N/A	16.50
RG-8/AU	1.95	N/A	N/A	7.44
RG-213/U	1.74	N/A	N/A	7.20

FB SERIES COAX RIVALS HELIAX TYPE CABLES BUT AT A MUCH LOWER PRICE.

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8D-FB $3.20/m
10D-FB $4.80/m
12D-FB $6.90/m

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NP-5DFB $9.10
NP-8DFB $9.40
NP-10DFB $9.70
NP-12DFB $10.40

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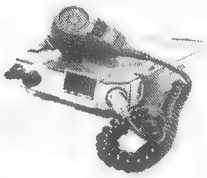

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10 watts

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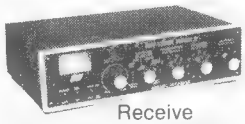

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RBA ..... $55 + $5 p&p

Write for further details

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FORWARD BIAS

VK1 DIVISION

Ken Ray
PO Box 710, Woden, ACT 2606

This month, as in every February, the VK1 Division will hold its annual general meeting. This will be on Monday, 25th of February, commencing at 8pm in the Studio room, Griffin Centre, Bunda Street, Civic. Anyone who wishes to nominate for a committee position should contact Alan Hawes, in his role as Public Officer, soon. Alan can be contacted on 58 8115 (BH) or 58 2568 (AH).

VHF BEACONS

The VK1 2 metre beacon has been reinstalled at its Mt Majura site, to the north-east of the centre of Canberra, operating on a new frequency of 144.410 MHz. It runs 10 watts into a "halo" antenna, and identifies as VK1RTA. The 6 metre beacon, on 52.410 MHz, will hopefully be installed at the same location in the next month or two. Any reception reports would be greatly appreciated, either via the QSL bureau, or direct to PO Box E46, Queen Victoria Terrace (or QVT), Canberra, ACT 2600.

AOCP AND NAOCP CLASSES

Provisional dates for the start of this year's classes are: AOCP: 7 February
NAOCP: 5 February

These will be held in the Griffin Centre, the same as last year.

FIELD DAY CONTEST

Once again, VK1WI will hit the airwaves for the annual John Moyle Field Day Contest. Previous year's efforts have been reasonably successful, as well as being a good way to demonstrate our hobby. If you would like to assist with the running of this station, contact any of the committee. It is good fun, so if you haven't tried a field day activity before, why not give it a go?

AR

VK2 MINI BULLETIN

Tim Mills VK2ZTM
VK2 MINI BULLETIN EDITOR
PO Box 1066, Parramatta, NSW 2150

A new year also is the start of a new Divisional year. This month we call for nominations for next year's Council as well as agenda items for the AGM. The closing date for both is 27th February at the Divisional Office, 109 Wigram Street, Parramatta. Council nomination forms are available from the office. The following week is the production and enveloping of the annual report, notice and business paper for the AGM and hopefully the ballot papers for the election. I say hopefully an election because as mentioned in last months notes the Division has not had sufficient Council nominations to require one for some years. The AGM will be held on Saturday afternoon the 30th March.

27 Feb — Close of Council nominations
Close of AGM agenda items
30 March — Annual General Meeting.

REMINDERS

Don't forget the John Moyle National Field Day on 23/24 February, help VK2's score. In March the programme is starting to fill up. Besides being the 75th year of the formation of the Institute in March 1910 it will see the running, by the Orange Amateur Radio Club, of the State Fox Hunting Championship as a forerunner to the National Event in VK1 later in the year. Write to OARC at PO Box 1065, Orange NSW 2800 for details.

The next Conference of Clubs will be held over the weekend 13/14th April in Sydney. Business will include the usual Club submissions, together with discussion on agenda items for the Federal Convention. As part of the weekend the annual Dural fireworks evening has been scheduled for Saturday evening at VK2WI.

A reminder that the best way to be up to date and informed on events and happenings is to listen to one of the Sunday broadcasts. The printed lead times (the majority of these notes were written last year) means that we have to know well in advance what is happening. At the same time we can only put on the broadcasts those things that we know about, so club publicity officers and all amateurs, if you have something that you think others should or would like to know about then write up the item and send it via the Divisional postal address. If you prefer, a cassette tape (up to 3 minutes) may be submitted. Dates for your club events are also required for the AR Event Calendar.

WICEN

Coming events for WICEN will be the annual Co-ordinators Conference to be held in Sydney on the weekend of 23/24 February. There is the annual caving exercise in March. Annual dues to WICEN became due on 1st January. Reminder notices have been sent. For further information about WICEN check in on the Thursday evening Sydney net on repeater VK2RWS 7150 at 9 pm, or drop a line via the office for some printed details.

FIELD DAY

The first post-war Divisional Field Day was held at the Wyong Golf Club on Sunday the 26th January 1947. The programme for the day was to meet at the Club by 11 am for golf, tennis, table tennis and a novel Morse receiving contest. Then there were 2 sessions of luncheon. The afternoon was a 7 Mc (MHz) hidden transmitter hunt with the day ending with afternoon tea at 4.30 pm. Trains from Newcastle and Sydney were met. The cost for the day was 7/6 (75 cents) per head and included food, beer (18 gallons) and soft drink. It appears that the day was very successful for the 85 who attended. The Morse receiving contest 'provided a great deal of amusement' and the transmitter was so well hidden that it was not found in the prescribed time.

Twenty eight years on the tradition continues when the Central Coast Amateur Radio Club hold their Field Day at the Gosford showgrounds. With an invitation to all, the packed programme of events gets underway at 8 am on Sunday the 17th February 1985, and concludes with prize giving at 4.15 pm. There is good cover at the showgrounds so the event is held regardless of the weather. A copy of the full programme may be had by sending an SAE to CCARC, PO Box 238, Gosford NSW 2250. The entry fee is $4.00 for OM, $2 for XYL and $1 for harmonics. Family at $7. Pensioner concessions are available. Tea, coffee and biscuits available through the day, event entry and outings included in registration fee.

There is an 'Open Mobile Scramble' on the way there between 7.45 — 8.15 am. Once there the radio events are a range of short and long Pedestrian Fox Hunts on 2 metres, sniffers required, in both AM and FM modes. There is the usual range of commercial displays and trade tables, ladies stall and children's events. The Disposals is on as usual, but remember to obtain lot numbers in advance from Bill Smith VK2TS, RMB 4525, Mangrove Mountain, NSW 2250 or phone after hours 043 74 1207. The trains will be met and bring your QSL card for the 'Calls Present' board. Further details and reminders will be given on the Divisional broadcasts.

CENTRAL COAST AMATEUR RADIO CLUB
28th ANNUAL FIELD DAY — Sunday 17th February
Gosford Showground.

AR

QSP

TWO UP

Recently in Melbourne, a driver came alongside me as we pulled up at an intersection

He gave me what I mistook to be the two-finger salute and I thought "what a rude man". So I returned it!

We met up again at the next set of traffic lights by which time his passenger, presumably XYL, had scribbled out his call-sign on a card which he held high out the window along with his mike stretched to the limit!

Then the penny dropped. He'd seen my small whip and the call-sign on the back of the van and was asking me if I could come up on TWO METRES!

How naive can you get? Perhaps I could be excused though because I wasn't into two metres then.

Contributed by Alan Campbell Drury VK3CD

AR

AMATEUR POPULATION IN CANADA

As of the 24 August 1984 the breakdown of amateurs in Canada is as follows:

British Columbia — 3916, Alberta — 1928, Saskatchewan — 791, Manitoba — 791, Ontario — 8633, Quebec — 4016, New Brunswick — 722, Nova Scotia — 1118, Prince Edward Island — 206, Newfoundland and Labrador — 456, Yukon Territory — 51, and Northwest Territories — 69, for a total of 22,697 amateurs in all.

The Amateur Service is growing, but only by 3-4% a year Total amateur population for 31 March, 1983 was 21,822, for 31 March, 1982 was 21,225.

from The ARRL Letter — Vol 3, No 22

AR

Unfortunately there are no Ionospheric Predictions this month due to the Holiday Season.

VK3 WIA NOTES

Jim Linton, VK3PC
DIVISIONAL PRESIDENT
VK3 DIVISION

VICTORIA 150

VK3 BEACON FREQUENCIES

FREQ. IN MHz	CALLSIGN	LOCATION
52.330	VK3RGG	Geelong
52.435	VK3RMV	Hamilton
144.430	VK3RTG	Waverley
144.435	VK3RMV	Hamilton
144.530	VK3RGG	Geelong
144.535	VK3RGI	Gippsland
432.430	VK3RTG	Waverley
432.435	VK3RMV	Hamilton
432.530	VK3RGG	Geelong
432.425	VK3RMB	Ballarat

A completely integrated education service is now provided through WIA Victorian Division

Following the decision last year by the Department of Communications to have quarterly theory exams, the WIA classes were restructured. Education Officer, Fred Swainston VK3DAC scheduled both the Novice and AOCP thoery and Morse classes so they would run six months, ending in time for the DOC exams.

This has made it possible for someone to start in the Novice classes, pass the exams, then move straight into the next AOCP class. The previous practice of having theory classes run nine or twelve months has been proved unnecessary — and the same amount of theory is being taught by slightly extending class nights.

Family and work commitments had also made it impossible for some aspiring radio amateurs to attend night class for up to twelve months.

Morse classes run by Ron Cannon VK3BRC are popular with not only the WIA theory class students attending. Novices who want to get their CW speed up to the AOCP level and Limited Call holders wanting a K-Call and Full Call are also taking advantage of Ron's excellent tuition.

Theory revision weekends, pioneered by Fred VK3DAC, are held just prior to the DOC exams, giving candidates an opportunity to brush up on their theory knowledge.

The VK3 Division also has a range of theory text books at discount prices for members.

Revision weekends:
Novice — 2nd and 3rd February.
AOCP — 9th and 10th February.
Classes commence:
Novice — 26th February.
AOCP — 25th February.
To enrol or for further inquiries, contact:
Education Officer,
Wireless Institute,
412 Brunswick Street,
Fitzroy, Vic 3065 or
Phone (03) 417 3535.

FEDERAL CONVENTION

Work has begun in preparation for the WIA Federal Convention to be held in Melbourne on the weekend of 26th-28th April.

This convention is the coming together of representatives from seven WIA Divisions to consider national and international matters affecting our hobby.

At the 1984 Federal Convention this Division put up twelve policy motions which were passed. These covered a range of topics, including WARC bands, Packet Radio, RTTY Speed, the WIA Federal Tapes, Special Callsign Prefixes, Certificates of Proficiency, the Call Book and AR Magazine

Any Zone, Club or individual wanting to suggest a VK3 motion for this year should contact the Federal Councillor, preferably in writing, complete with supporting argument, and not of a subject already rejected by an earlier Federal Convention, unless it adds something new.

For example, suggestions of increased Novice allocations and operating privileges have been fully discussed, but not supported at Federal Convention

MEMBERSHIP SUBSCRIPTION RENEWAL

Renewal notices were sent to members in October/November, and if you haven't paid please do so immediately.

This Division has the highest number of WIA members numerically when compared with the other Divisions. The Vic Div Council believes this situation is due to the strong active role VK3 plays in Institute affairs, and the value-for-money service it gives to members.

YOUR SUBSCRIPTIONS — AN EXPLANATION

Why has the membership subscription gone up and why is VK3 dearer than other divisions?

This double-headed question has been put to several Vic Div Councillors by members since the membership renewal notices were posted.

The WIA like everyone else is faced with cost increases — postage, power and municipal rates are just a few. Putting cost increases aside, there are many other good reasons why fees have gone up.

Looking at the Division's financial situation it can be seen we have no debts, own the Wireless Institute Centre, but we are in need of money to get things done.

During 1984 $10,000 was spent on maintaining and upgrading the network of more than 30 VHF/UHF repeaters and beacons in Victoria. This network is vital to enable the Amateur Radio Service, through WICEN, to play its rightful role in disaster preparedness, and at the same time is part of amateur radio in the 1980s.

Repeaters are but just one of the capital works projects being tackled in Victoria.

The weekly broadcast through VK3BWI is due for new equipment, and it's planned this year it will get a modern operating console.

A WICEN control centre and the broadcast studio will also hopefully share a new suburban site later this year enabling further improvements from VK3BWI as a service to all of which radio amateurs can be proud.

A minimum of maintenance has been done on the Wireless Institute Centre and 1985 will see refurbishing work undertaken within restraint of our budget.

About $2 of your subscription will be used on public relations and membership recruiting activities during the Institute's 75th Anniversary year.

Our hobby is international and through the International Amateur Radio Union the WIA contributes financially and participates in matters affecting the Amateur Radio Service.

Negotiations with the Department of Communications cover every aspect of amateur radio in Australia.

As a member you know the WIA represents the radio amateur at a local, national and international level.

However you deserve an explanation of why (apart from cost increases and the capital works projects) the subscription rates are higher than other Divisions.

It's not possible to simply compare the various fees without considering the free services and level of service provided by your Division.

We have a free QSL bureau service to members — others charge their members on every card handled.

The Victorian Division pays the licence, insurance, power and site costs of most repeaters.

The Divisional Headquarters is open five days a week to handle book sales at a discount price, disposals sales and membership inquiries.

We maintain a library of reference books, magazines and publications of interest to radio amateurs and shortwave listeners.

Members from throughout the Division take advantage in person or by mail of the photocopying facility for published articles and circuit diagrams.

If you live in one of the six WIA country zones, part of your subscription goes in funding local activities through Zone committees.

The Vic Div Council considered all aspects when setting the fees to finance the Division in 1985 and for the future.

I'm sure you'll agree WIA membership which costs 75 cents a week (even less for pensioners, students and family members) is value for money in terms of service provided and as an insurance policy for your hobby.

VICTORIA 150

As previously announced on the VK3BWI broadcast and through various nets — Victorian radio amateurs can use the alternative prefix VI3 until March 31.

Following representation from the WIA, the Department of Communications approved use of the prefix as part of the Victoria 150 celebrations.

The commemorative callsign VI3WI has been highly successful and continues to be activated by various WIA zones and member clubs.

If you intend to use the VI3 prefix, remember your QSL will be sought after so in the best interests of Australia's image overseas plan to have a card bearing the special prefix.

Keith Heemskerk VK3AIH using the callsign VI3WI from Victoria's birthplace, Portland, on the state's birthday, 17 November. He shared activation of the commemorative callsign with others in the Portland area, Jack Heaver VK3VNQ, Ray Elliot VK3LK, and David Armstrong VK3XJP.

Photograph courtesy Barry Wilton VK3XV

AR

ATTENTION RSL MEMBERS

The hobby of amateur radio is going to be promoted among returned servicemen and women.

Already four WIA members, who are also Returned Services League members, have volunteered to help with this project, but more RSL members are needed to make this special effort a success.

To enlist in this project, aimed at helping returned servicemen and women join the ranks of radio amateurs — submit your name to the WIA Public Relations Officer, 412 Brunswick Street, Fitzroy, Vic 3065.

AR

FIVE-EIGHTH WAVE

Jennifer Warrington, VK5ANW
59 Albert Street, Clarence Gardens, SA 5039

Back in December I mentioned the history of the WIA which Marlene Austin VK5QO had compiled for this Division. Council decided that one means that we had at our disposal to thank Marlene was the ICS Award, which for the December quarter, is for services to amateur radio. The only problem was, how to get Marlene to the Christmas meeting in order to present it to her. We enlisted the help of her OM Brian VK5CA and also Joy VK5YJ. I'm not sure when Marlene started to get suspicious, but even Joy inviting both of them to tea and then suggesting that they go on to the meeting from there (after tea had been eaten) was to no avail. However, it was presented to Marlene later that same week when President Dick Boxall VK5ARZ and I took it up to their QTH. A start has been made on copying the original manuscript so hopefully it won't be too long before it can be viewed by everyone, and copies will also go to Federal Office, the State Library, DOC, etc.

JUMPED THE GUN

Also back in December I made comments regarding a new broadcast announcer. Apparently I was a little previous with my news as things were still being negotiated and had not, as I thought, been finalised. My apologies to anyone who might have been embarrassed by this.

CLUBS

Club news this month comes from the South Coast ARC my thanks to President John Gill VK5AJG for copies of their interesting newsletter "SCARCHAT". Club meeting nights are the first and third Thursday every month, at 12 Baden Terrace, O'Sullivan Beach, the kettle is always boiling, visitors are welcome — BUT — *"prospective members they positively embrace"* (sounds like a very friendly club!) Club Secretary is Graeme Langshaw. The club net, known as the Southern Vales Net, is on 3.595 MHz +/–, at 0930 UTC — every Tuesday. Their Southern Vales Award can be yours if you QSO with 10 club members (or 8 and the club station, which counts double).

The Port Adelaide ARC have also sent me an update on their information. The President is Donald Hobbs VK5AS and Secretary/Treasurer is Harry Hillard VK5PIH. Club callsign is VK5APC and a net is held daily on 28.440 MHz at 7.00pm local time. Meetings are alternate Wednesdays at 7.30pm local time, at 155 Hart Street, Glanville.

DIARY DATE

General Meeting — 26th February. The speaker will be Ted Dobrzynski (from the Walkerville Car Club, and organiser of many of the major car rallies) who will speak on "Map Reading and Navigation".

AR

WA BULLETIN

Fred Parsonage VK6PF
Acting Secretary
Box 10, West Perth, WA 6005

Since the arrival of the 1985 subscription renewal notices, there has been many queries as to "where the money goes". To attempt to show how the subs are divided, note the table headed Subscription Rates and Joining Fees 1985 in Amateur Radio dated December 1984.

Briefly, this shows that for WA the basic rates are:

Full Member	*$31.50*
Associate	*$30.50*
Pensioner	*$24.50*

Unfortunately the table fails to show a breakdown which is:

Federal		*$12.27*
Amateur Radio		*$11.76*
IARU		*.47*
	Total	*$24.50*

Which leaves the Division:

Full Member	*$7.00*
Associate	*$6.00*
Pensioner	*$0.00*

From this the Division places 50 cents per member into a contingency fund for WARC 99 leaving:

Full Member	*$6.50*
Associate	*$5.50*
Pensioner	*-50*

There has been no increase in the Divisional portion of the subs for four years and in this time we have absorbed the Federal increase twice and passed it on in the other two.

AR

TAPES $5 each inc. post.
• 5 Words per minute – Novice Licence
• 8-10-15 Words per minute – Exams
• 15 Words per minute
SPECIAL SPEEDS AVAILABLE ON REQUEST
NOVICE STUDY KIT
It contains:
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Adjust your antenna for maximum performance. Measure resonant frequency, radiation resistance and reactance. Better than an SWR meter. Operates over 100 MHz. Most useful test unit in your shack
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Each outlet is individually filtered.
Protect your computer from unnecessary power problems, say 'No' to dirty power.
240V AC at 6.0A TOTAL
SUITS ALL PC and Small Business Computers

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Ideal for Dipoles, Beams, Quads.
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G. SCOTT, 11 Balmoral Crescent, Surrey Hills, Victoria, 3127

LETTERS TO THE EDITOR

Any opinion expressed under this heading is the individual opinion of the writer and does not necessarily coincide with that of the publisher.

MURPHY STRIKES

I note an error in my article "A Horizontal Loop Antenna" (Dec AR) due to incorrect conversion to metric measurements by the Technical Editor. In the article in the first column I read — "The poles are at each corner of the yard which is about **28 metres square** thus giving a loop of about **112 metres total length**" — The remaining measurements are near enough but the above could cause confusion.

The measurements should have been 18.3 metres square and 73 metres total length.

Best regards
Bruce Hannaford VK5XI
57 Haydown Road,
Elizabeth Grove, SA 5112

AR

THANKS FOR JOTA

Thank you once again on behalf of all members of the Girl Guide Association of Australia for assistance given by members of the Institute during the 27th Jamboree on the Air.

All may be assured that members contribution to this major event in the Girl Guide year is appreciated by all of our members who took part.

Yours faithfully,
Mrs WP (Irene) Daniel,
Australian Guide Liaison for JOTA.
4 Cypress Drive,
Cypress Gardens, Qld, 4217

AR

FEELING PROUD

Thanks for the fine effort of all the people who give so much each year to us, the radio amateurs, through the excellent journal.

One feels proud to be a member of such a prominent organisation that has done such magnificent work, in particular for the novice cause and with the government bodies for radio in general.

James McLeod VK2LVQ,
43 Westbrook Street,
Beverly Hills, NSW.

AR

EMC VERSUS AMATEUR RIGHTS

Dave VK2BBT (letter September 1984) cautions against the view that being in the right is all that matters and that anything which degrades a good public image should be avoided unless there are powerful arguments for it. I can appreciate the idea that we live in a community and must balance our rights but what is the result?

A survey by RSGB of amateurs in the London area showed a quarter had voluntarily given up HF operation because of EMC problems. Did they give up their operating rights to give our hobby a better image or because others exercised their rights and amateurs were prepared to give them up? Should we amateurs give up our right to erect an aerial mast on our own property because neighbours complain and we don't want them or council to have a bad image of us?

Sometimes compromise is possible but many times the new amateur is intimidated by the situation or an amateur just does not want the hassle of the approaching conflict and is forced to give up the hobby.

If we cannot freely exercise our right to enjoy this hobby then for all practical purposes we will end up with no rights or rights which can be unjustly suppressed. We should not be deflected from paths which increase the diversity and breadth of our hobby. The higher power being proposed for AOCP is within the rules for amateur radio as laid down by the ITU. It is yet another extension to the capability and diversity of our experimenting and communicating endeavours.

The USA, having the same EMC problems as Australia, is a place where the power level of 1000 W has been part of amateur radio for over 80 years. Based on this experience, amateur operators via ARRL and the licensing authorities via FCC did not hesitate to introduce still higher power levels for all amateur radio classes in the USA. The Novice power level rose from 75 W input to 200 W output (more CW output than permitted to an Australian holder of the AOCP!) and all other licence classes were raised from 1000 W input to 1000 W output CW and 1500 W output SSB.

73, **Sam Voron VK2BVS,**
2 Griffith Avenue,
Roseville, NSW, 2069

AR

HIGHER POWER

Neil VK6ANB, re your letter October 1984. You reported that several amateurs within a 3 km radius appeared to have broad signals and that increasing AOCP privileges to 1000 W CW, 1500 W SSB as used in the USA would broaden signals so much that only one could use the band at a time.

It sounds like the problem is one of overload in your receiver. In fact a 30 W or a 1500 W signal should occupy the same bandwidth.

A product review on the receiver in the FT102 (QST October 1983 page 44) demonstrates that the bandwidth of a signal is dependent not on output power level but on receiver performance.

From a listening test two blocks from the "high power onslaught of W1AW" (the ARRL HQ station, presumably using their full 1500 W) came these results *"No problems were noted when the preamplifier was not in use. In fact I was able to copy weak signals within 5 kHz of the W1AW frequency."*

73, **Sam Voron VK2BVS,**
2 Griffith Avenue,
Roseville, NSW, 2069

AR

HIGH POWER PERMITS

I wish to express support for the view of Neil Basden VK6ANB and others regarding high power licences as proposed by Sam Voron VK2BVS.

Licences are issued for the purpose of experimentation with radio communication on the amateur bands. In keeping with this, if communication cannot be established with another part of the globe, a number of remedies can be tried. These would include different bands, antennae, and/or modes of transmission. In certain circumstances, high power transmission can be useful as an experimental technique, and a permit can be obtained for this from the Department of Communications.

Amateur radio is not about the establishment of global third party traffic nets. If this can be done within the limits of existing licences, to the public benefit, (ATN, WICEN, etc) well and good. However, except in emergency, amateur radio is not a vital communications link and the potential threat to low-power band users is far too great to allow large numbers of high power transmitters on air.

If the traffic to be sent is vital enough to require absolutely reliable global transmission, amateur radio is the wrong medium. Telecom and OTC exist purely for such traffic and if the traffic should be handled by them, don't clog up the already congested amateur bands with it.

Yours faithfully,
Colin de Kantzow VK2JCD
42 Nelson Street,
Gordon, NSW, 2072

AR

ATTENTION ALL AMATEURS — ESPECIALLY THOSE INTERESTED IN WICEN

During the WICEN involvement with the Alpine Car Rally in November, I had discussions with Mr Tom Snooks of NSW. Tom is a partner with Mr Hans Tholstrup, both of whom are organising a Safari from Melbourne to Darwin on 24th to 29th August 1985 with motor vehicles consisting of trucks, car, cycles, four wheel drives, etc.

The proposed route is via: Mildura, Broken Hill, Birdsville, part of Simpson Desert, Alice Springs, part of Tanami Desert, Katherine to Darwin. This route will avoid main roads as much as possible but seems accessible to 2WD vehicles.

In the time allotted it is obviously a fast journey with long driving hours — an endurance test at least!

I asked his opinion about a possible WICEN involvement for ongoing communications, and although expressing surprise at the suggestion thought the idea first class. This letter is to sound out amateurs in all states, particularly WICEN groups, for their thoughts on the matter, thinking along the lines of a series of portable and perhaps mobile points along the route, to pass progress, and other information during the trial.

If such could be organised, and I'm sure it could be, it would provide a unique and valuable exercise demonstrating the effectiveness of amateur radio from bottom to top of Australia in conditions removed from fixed home locations.

At the same time the interest in visiting some of the remoter areas in the Centre and Northern Territory, should have considerable appeal.

I do not wish to organise such an undertaking, but am able to offer considerable assistance, and would be willing and able to go to any part of the route.

Is my idea interesting, or in dreamland?

Could this letter provoke some answers via the magazine?

73, **Keith Scott VK3SS,**
34 Henry Street,
Maffra, Vic. 3860

AR

BROWNIE MORSE

Early in March 1984, in course of conversation, the possibility of teaching practical Morse to a Brownie pack became the subject. The Brownie/Guider, Mrs Nelson, considered it could be a very good challenge for the first Brownie Pack.

The group consisted of quite a number of young girls, only four decided to go the distance.

One night per week was available, and for one hour only. The standard aim was for five words per minute, sending and receiving under novice conditions laid down in the DOC Amateur Handbook. However, as I believe in letter speeds of not less than ten words per minute, I used a double barrel method.

The results were fascinating, as while they could handle the computer style slow speed spacing and letter formation, they did not like it at all.

Around October we went to two periods per week of approx 45 minutes, and finished in early November.

As their letter recognition speed was amazing, it became greater than their ability to write. There is a message in here somewhere in relation to cursory script or block letters as against running hand.

However, the final result was that three girls completed the course at 5WPM in fine style. (One unfortunately lost interest in the last month.) The exercise was immensely rewarding to me, the girls enjoyed it, and it was an association that I will remember for the rest of my life

As an OLD TIMER may I suggest that other old pre-war amateurs try this as it is quite the most

From left — Bill VK3XC, Karen Little aged 11, Kellie Adcock, 11, and Melissa Humphrey aged 10½ years.

refreshing thing I have done in years.

Mrs Nelson took them on a visit to OTC where the operators really opened their eyes to traffic speed.

The girls presented me with a beautiful book as a token of thanks.

C (Bill) HOLLAND, VK3XC.
Box 12,
Maryborough, Vic, 3465.

Footnote: Bill would be interested to compare notes with others on this subject.

RIGHTFUL RECOGNITION — BUT . . .

In an article on p. 14 of 'AR' for December 1984 titled "Cyclone Tracy — 10th Anniversary", the author, Jim Linton, VK3PC, rightly recognises the efforts of some of the operators who participated in the WICEN National Net for Darwin.

The dedication displayed by 'Slim' Jones VK8JT, is recognised and praised by all those who operated with him during this epic network.

The author has given his version of the operational details of the net. However the true version based on the facts, is as follows:

1 The first amateur radio signals to come out of Darwin were transmitted at 250001 UTC by VK8RR, Bob Hooper, the manager of the OTC communications facility which was completely destroyed.

2 Many amateurs in five states were on the air between 250001 and 250115 UTC to contact and help Bob who was describing the general destruction.

3 The WICEN National Net for Darwin was activated at 250115 UTC by the Cairns controller of the North Queensland WICEN group [VK4YG] in response to an appeal by Bob, VK8RR, for an urgent message to be passed to OTC HQ in Sydney concerning Darwin Radio, VID.

4 Nth Qld WICEN arranged for the Cairns OTC manager, VK4VI, Keith Parker to talk to Bob and swift action resulted in the restoration of VID Darwin Shipping Radio using equipment on board the MV 'Nyanda' in Darwin harbour.

5 At 250230 UTC, VK8OM, Owen Marshall [now ZL1BKF], mine manager at Koongarra NT checked into Cairns control with weather reports and site status.

6 'Slim' Jones, VK8JT, after salvaging equipment and erecting aerials, came on air at 250430 UTC and checked into the net.

7 Later in the afternoon WICEN COMCEN at Police Headquarters in Melbourne came on air and net control was passed to Ken, VK3AH by VK4YG.

8 The statement: "History-making permission was then given to handle Third Party Traffic telegrams" is NOT correct.

Amateurs in NSW and Qld handled TPT telegrams in emergency networks in 1948-50-54 and 56 during floods and cyclones and received letters of thanks from the Postmaster General of the day to testify to this fact.

9 The telegram which was sent to the PMG and the PM was to prevent the net from being closed down by an officer of the Victorian Radio Branch — not primarily to get permission to handle TPT telegrams — that followed later.

10 After WICEN COMCEN was closed down on 29/12/74 Nth QLD WICEN continued to operate in a WICEN-SES-NDO operation until all communications were restored.

This group operated for seven days with an 'on air' time exceeding 85 Hours.

The WICEN national net for Darwin following "Cyclone Tracy" December 1974 finally closed on 31/12/74 after a marathon emergency effort by many Australian Amateur Radio Operators.

73

Ted Gabriel VK4YG,
PO Box 245,
Ravenshoe, Qld, 4872.

WICEN

I am in the process of writing an article of historical value concerning the role of WICEN in the national communications network for the city of Darwin following Cyclone 'TRACY' on Christmas Day 1974.

I would appreciate the assistance of fellow amateurs who may have tape recordings, media cuttings, log book information or personal recollections of this major event.

All contributions will be acknowledged and, where needed, material returned.

Since the facts of this network and the work of those who participated have never been fully documented it is therefore fitting that it should be recorded in this, the 75th anniversary year of the WIA.

Regards

Ted Gabriel VK4YG
PO Box 245,
Ravenshoe, QLD, 4872

WHAT'S YOUR VALUE?

I think it is rather urgent that the matter mentioned below be given some publicity.

I wonder how many amateurs have assets test problems? As the typical pensioner amateur looks over his beloved equipment and mentally adds all the purchase prices he might well be surprised to get a total of five to ten thousand dollars. Added to other things it might well push him over the assets threshold and mean a much reduced pension. Of course we tend to think of our gear being worth much the same as when we purchased it but this is not really the case.

In the assets test you are asked for YOUR estimate of what things are worth. You are asked to use a value for things such as you would get if you sold them NOW. The key words are YOUR estimate, and sold NOW. Don't value your items with a loving eye. Do a role change and think of yourself as a professional Auctioneer Valuer come to buy all your goods as a job lot. This steely eyed emotionless professional valuer will see your possessions in a quite different way and if such a person did give you a price you would probably faint at how low it was. Such a price would be far more accurate than yours and would be perfectly legitimate to use for the assets test.

With professional valuers the idea of non-professionals making their own valuations is a great joke. They say things like — "It took me 20 years to learn the trade, what hope have inexperienced old people got of making a reasonable valuation?" Yes indeed, your valuation will not be very accurate. But even if you are a bit out, YOUR valuation will be accepted and no one will enter your house to check it.

Your valuation should be as if you sold NOW. Not waiting for a good buyer. More like you would get at auction with no reserve price, to sell without delay. At auctions, often goods don't bring anywhere near what they could have if the seller had waited for a keen buyer.

The assets people say advertised prices for similar items are a good guide. Maybe, but don't forget that most people optimistically advertise goods at prices they only hope to get and usually finish up selling at a much lower figure.

I trust all this will help you take off those rose-coloured glasses as you value your beloved gear etc. so you will see things as they really are and estimate accordingly.

Best regards to all.

Bruce Hannaford VK5XI,
57 Haydown Road,
Elizabeth Grove, SA, 5112

MAGAZINE REVIEW

Roy Hartkopf, VK3AOH
34 Toolangi Road, Alphington, Vic 3078

(G) General. (C) Constructional. (P) Practical without detailed constructional information. (T) Theoretical. (N) Of particular interest to the Novice.

73 Magazine. October 1984. Special antenna issue, Feeders and test equipment. (CN) NEVER SAY DIE. (G) Regular editorial comment for those interested in the future of amateur radio.

73 Magazine. November 1984. Color Computer SSTV. (P) Cure for TVI. (P) Sealing coax cable joints. (P)

73 Magazine. December 1984. Touchtone decoder. (C) Weather Satellite SSTV. (P) Transistors. (N)

CQ. September 1984. World wide DX Contests (G)

VHF Communications. 2/1984. RF Millivoltmeter. (C) GOES weather satellites. (G) VLF receiver (C) Spread Spectrum technology. (T)

Break In. October 1984. Two metre preamps review. (P)

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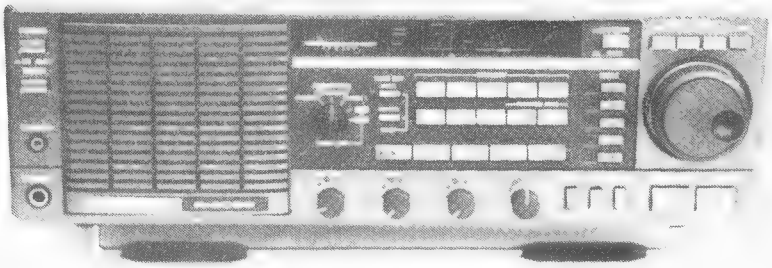

The R-2000 provides outstanding performance through use of micro-processor controlled operating functions, allowing maximum flexibility and ease of operation throughout its operating range. An all mode receiver, it covers 150 kHz-30 MHz in 30 bands, on SSB, CW, AM, and FM. Key features include digital VFO's, ten memories that store frequency, band, and mode information, memory scan, programmable band scan, digital display with 24 hour dual clock, plus timer, and a host of other features to enhance the excitement of listening stations around the world.

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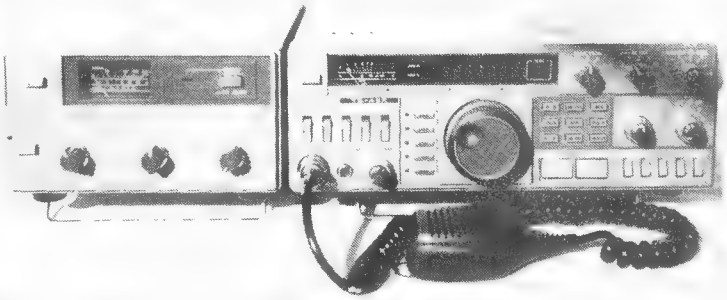

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Silent Keys

It is with deep regret we record the passing of —

MR T W AUSTIN L40787
18-09-84
MR J H L BADENOCH VK5LB
MR FRANCIS WILLIAM BEADLE VK6FW
12-11-84
MR ANDRE DOMJAN VK1XX
MR W HAMPSON VK3AWH
21-12-84
MR G HEINRICHS VK3NQ
MR L J MACRAE VK2EEV
14-08-84
MR BRUCE MILLER VK2VRG
MR R C MORRIS VK4MT
MR CLEMENS EDGAR SCHMIDT VK5WG
06-11-84
MR L H SEIDEL VK6WN
MR JOHN ERNEST TELFER VK2BTQ
14-10-84
MR HANS THUMFORT VK6ATT

Obituaries

JOHN ERNEST TELFER VK2BTQ

It is with deep regret that I advise of the death of the Past President of Mid South Coast ARC, John Ernest Telfer VK2BTQ on 14 October 1984.

John Ernest Telfer was born on 15 January 1910 in Subiaco, WA. He subsequently moved to NSW and served with AWA for 50 years and retired from the position of "Special Projects Manager and Trouble Shooting Officer".

He retired to Mollymook on the south coast of NSW and obtained his AOCP on 17 July 1975 with the call sign VK2YDQ.

He was the founder of the Mid South Coast Amateur Radio Club and the instigator of the current repeater, VK2RMU. He worked tirelessly for the club magazine, Lyrebird, producing it for many years and was club president for the year 1982/83.

His main interest was in the two metre band and he was proud of the fact that he had had in excess of 400 ZL contacts.

Although he had recently returned to Sydney to live, he attended the quarterly meetings at the club and had in fact attended the last meeting on the day he died.

Deepest sympathy is extended to his wife Gwen and their children.

David Parry,
Hon Sec.
Mid South Coast ARC
AR

ANDRE DOMJAN VK1XX

Andy passed away at Royal Canberra Hospital on 7th December 1984 after a short illness, aged 66 years.

VK1XX joined the VK1 Division in February '84 when he came to reside in Canberra to be near his family. He held the call VK3AEW when living at Box Hill, Victoria.

Andy was a keen CW operator and was close to gaining his DXCC Award. He will be sadly missed by his many amateur radio friends in Australia and overseas.

To his wife Gabriella, sons Andrew and Peter and daughter Gabriella, amateurs extend their deepest sympathy.

Jock Fisher VK1LF
AR

BRUCE MILLER VK2VRG

Bruce died in a motor accident early on the 28th of December 1984, aged 21. One of the first YRS student members of the Liverpool and District Amateur Radio Club, Bruce attended the novice classes and obtained his callsign at the age of 15.

He assisted in club activities and later served a term as secretary. Continuing his interest in electronics, he became a trainee technical officer with OTC.

Bruce was notable for his cheerful outgoing personality, always prepared to assist and brightening any occasion. A regular field day participant, he was known as a considerate and fair competitor. He was a true and inspiring friend.

His death at 21 is a sad loss to his family and friends.

Athol Tilley VK2BAD
AR

HANS THUMFORT VK6ATT

We regret to announce the passing of Hans Thumfort VK6ATT in November. He was known only to a few operators in WA as he was relatively new to the state, having only obtained his resident visa in January 1982.

Hans arrived with his wife Hilde VK6AHT, his son Hans VK6ZBA and wife Barbara and son Mark and his younger son Peter who is at present doing his BA in Chemistry at Perth University.

We first met Hans and Hilde on the 28 MHz band in 1980 as OE6TT and OE6YBG respectively and those who might have tuned into 28.340 at 4 pm local time would have heard us waffling away in German daily.

He had a zest for life and was a keen amateur, having been a Sparks in the German Navy.

Nothing was too much trouble for Hans to help his fellow amateur. He also had a wonderful sense of humour. He was also a keen slow scan enthusiast. He was a very colourful character, sadly missed by all his close friends.

Heartfelt condolences and sympathy go out to his surviving family Hilde, Hans, Barbara, and young Mark and Peter.

Goodbye Hans and thank you for your friendship. We all miss you and you will always be in our thoughts.

Norman Schroeder VK6NS and Helene VK6HI
AR

CLEMENS EDGAR SCHMIDT VK5WG

Clem was born at Point Pass SA on 21/12/1911 and farmed his father's property at Ngapala during World War II until his marriage to Joyce in 1950 when he built his first home at Eden Hills SA.

His business interests consisted of breeding tropical fish and the culture of aquatic plants. He won many prizes at the Adelaide Royal Show and was a member of the Aquarium Society.

In June 1962 he passed his AOLCP and was first licensed as VK5ZES. In December 1963 he passed his AOCP and received his full call of VK5WG ("Witchety Grub") as he was affectionately known to his amateur friends.

In 1967 he moved back to Ngapala, on the farm, where he built his present home.

Clem was widely travelled overseas, including Israel which he visited a number of times.

He made many friends among the amateur fraternity particularly on the daily 40 metre net.

Over the last few years he did not enjoy good health and received many and varied treatments (one of which he called "weedkiller") for the disease which was to claim his life. He passed away on 6th November 1984.

Throughout his sickness he never lost his sense of humour.

He will be greatly missed by his many friends.

To his wife Joyce and only daughter Carolyn we extend our sincere sympathy.

Vale Clem

Keith Ring VK5KH
AR

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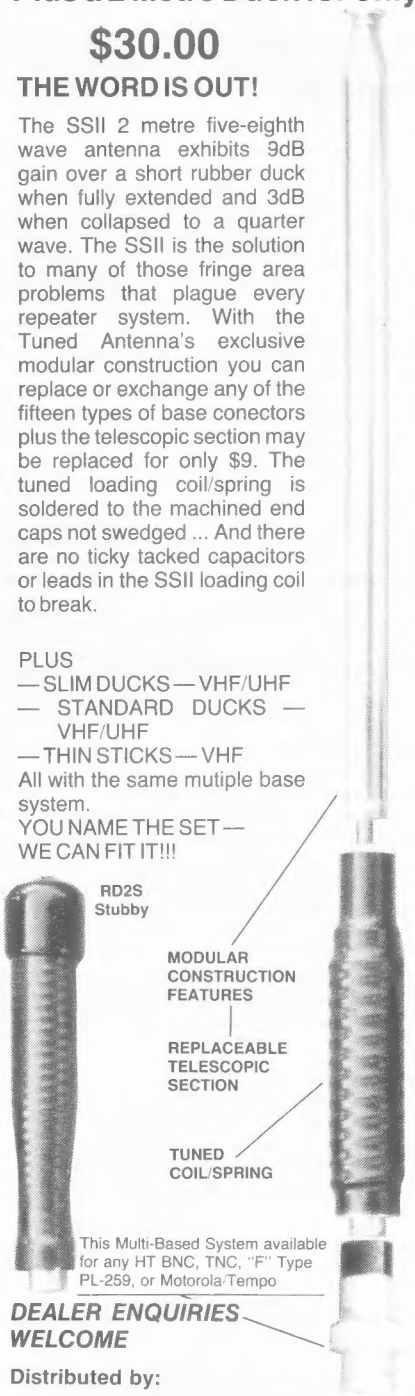

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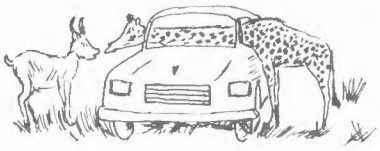

All copy for inclusion in April 1985 Amateur Radio must arrive at Box 300, Caulfield South, 3162 no later than midday 22nd February.

HAMADS

PLEASE NOTE: *If you are advertising items FOR SALE and WANTED please write each on separate sheets, including ALL details, eg Name, Address, on both. Please write copy for your Hamad as clearly as possible, preferably typed.*

- **Please insert STD code with phone numbers when you advertise.**
- Eight lines free to all WIA members. $9 per 10 words minimum for non-members.
- Copy in typescript please or in block letters double spaced to PO Box 300, Caulfield South 3162.
- Repeats may be charged at full rates.
- QTHR means address is correct as set out in the WIA current Call Book.

Ordinary Hamads submitted from members who are deemed to be in the general electronics retail and wholesale distributive trades should be certified as referring only to private articles not being resold for merchandising purposes.

Conditions for commercial advertising are as follows: The rate is $22.50 for four lines, plus $2 per line (or part thereof) minimum charge $22.50 pre-payable. Copy is required by the deadline as stated below indexes on page 1.

AMIDON FERROMAGNETIC CORES: Large range for all receiver and transmitter applications. For data and price list send 105 x 220 SASE TO: RJ & US IMPORTS, Box 157, Mortdale, NSW 2223. (No enquiries at office: 11 Macken Street, Oakley, 2223).

□ WANTED — NSW □

DRAKE L-7 AMPLIFIER, MN-2700 antenna turner, Yaesu FT-726R tcvr, CD-44 or Ham-M antenna rotator. Please contact VK2OE, PO Box 1914, Wollongong NSW 2500.

HARD DISK DRIVE to suit PDP 1103 computer. Any of the following 5+5 mb drives would be suitable Wangko, Caleus, Hawk, Western Dynes. VK2BZE. Tel: (042) 96 4595.

MANUALS/CIRCUIT DIAGRAMS or photo copies for McGraw-Edison MOD 65-B standard sig gen. All costs gratefully paid VK2AVU QTHR. Tel: (02) 644 4507.

MANUAL: Operational manual for a Taylor 45C valve tester wanted urgently. Will buy manual or photo copy and return. Replies to Ken VK2ZIQ, PO Box 916, Orange NSW 2800.

MANUALS: Any copies of "Official Radio Service Manuals", "Gernsbacks Radio Encyclopedia" or old radio books. Tel: (066) 55 6135.

PROP PITCH MOTOR any condition. Please phone or write, Spencer VK2KC, QTHR Tel: (043) 88 2356.

□ WANTED — VIC □

COMMAND RECEIVER BC946B 520 kHz to 1.5 MHz. Any condition. VK3ZF QTHR Tel: (03) 435 1697.

MORSE KEYS — young enthusiast collects Morse code keys. Straight keys, "BUGS" (semi-auto), sounders, ex PMG military etc. Cash and freight paid. Accept reverse charges. Maurie VK3CWB, QTHR Tel: (050) 22 2120.

RECORDS — I collect 78 RPM records. Will pay cash for jazz, dance band, and pop vocals from the 1930s. Ken VK3NJ. Tel: (03) 561 4124.

□ WANTED — QLD □

BUZZA AND PENDAGRAPH (any model) semi auto bugs. Any condition. Write VK4SS, 35 Whynot St, West End, Qld 4104 or Tel: (07) 44 6526 before 10 am.

COAXIAL CABLE — 2 metres of 93 Ohm or 125 Ohm Coax for Phasing Harness. Bevan VK4ABV, QTHR, Tel: (071) 63 1477.

COUNTER DIAL FOR ATU. FT241 & FT243 xtals any freq. Len VK4JZ new QTH 33 Hill Cres, Carina Heights, Qld 4152. Tel: (07) 398 2002 after 6 pm.

EXAM PAPERS OF THE 1930s VINTAGE. Al VK4SS needs a copy of AOCP Exam papers set in the 1930s, if anyone can help please write VK4SS, 35 Whynot St, West End, Qld 4101 or Tel: (07) 44 6526 before 10 am.

VALVES type 811A. Lionel VK4NS, QTHR.

□ FOR SALE — ACT □

YAESU FT-757GX tcvr bought last June, still under warranty, $950, Yaesu FC-700 antenna tuner, bought last July, still under warranty, $145, both in perf cond. Owner moving to UHF. VK1KEL, Tel: (062) 54 2679, Write: 23 Shumack St, Weetangers 2614.

□ FOR SALE — NSW □

EQUIPMENT DESK in ex cond. Metal framed with Teak Formica top size 3.5 ft by 2.5 ft and with 2 drawer $75 also swivel chair $20. Al VK2AXR, Tel: (02) 477 6275.

FT-107 TCVR. Complete with mems, digi memory shift, power supply & hand mic, immaculate, $800 ONO. Mirel VK2BOD, Tel: (02) 601 2560 AH.

ICOM MODEL AGI — GAaSFET masthead preamp 420-450 MHz 15 dB gain 50 ohms in & out 15 W max feed through power. Brand new $75. Kenwood model VFO-120 remote VFO 5.50-6.00 MHz to suit Kenwood models TS120V/s, 130, 530 & 830. Brand new $100 ONO. Art VK2AS, QTHR, Tel: (02) 467 1784.

KENWOOD TS-130S, fitted with additional CW and SSB filters type YK-88C and YK-88SN respectively. Kenwood Power Supply PS-30, MC-50 Desk mic, H55 headphones. Handbook for TS-130S and Data sheets for other items. All in VG condition, ex deceased estate. $675 the lot ONO. VK2BFJ, QTHR, Tel: (043) 32 5758 (Central Coast).

SHACK CLEARANCE. Icom IC701 with PS $550: Diawa CNW418 ATU with SWR meter $220: Icom IC502 6 m SSB portable $100: Icom IC255A 2 m FM 25 W mobile $300: Yaesu FT290R 2 m SSB/FM portable with Nicads & charger $300: Yaesu FP707 power supply, 20A $150: 2 kVA Generator $400. Ron VK2EFJ, QTHR, Tel: (050) 27 3262.

SIGNAL GENERATOR. 2.0 to 400 MHz in 6 bands. US Measurements Corporation Model 80. Comp with manual and 240/110 V transformer, $50 ONO. Ken VK2BIW, QTHR, Tel: (02) 449 2198 AH, (02) 221 2244 BH.

YAESU FRDX400, FLDX400 tx, rx. Rx covers 160-2m, AM, FM, SSB & CW. Tx covers 80-10m. $300 the pair. VK2BZE, Tel: (042) 96 4595.

YAESU FT102, WARC bands, MH-1B8 mic. A1 cond, $950. VK2AEZ, QTHR, Tel: (065) 54 8269.

YAESU FT707 tcvr $550, Kyokuto FM2025 MKII 2 m tcvr $220, Siemens M100 W/punch & reader 45 Baud $60 Wilson MC103C 10/11 m beam $50, Gordon VK2AVU, QTHR, Tel: (02) 644 4507.

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BEAM — HB35C 5 el 3 band beam $299. HB443DX 4 el 4 band beam $449. 6 ft, 20 m helical whip free with each beam. VK3ARZ, QTHR, Tel: (03) 584 9512.

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REALISTIC DX-200 5 band. Used once otherwise new in cartoon. $180 — cost $250 in late 1982. Also 2 PC. DC motors $60/pair (or offer). Tel: (052) 61 2948.

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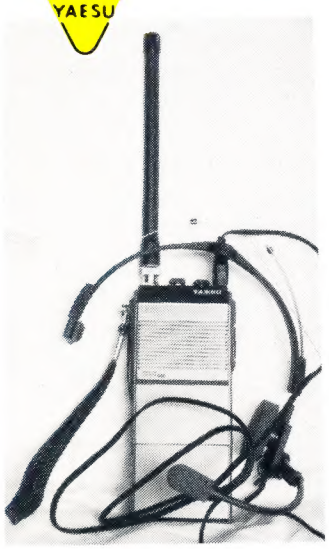

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